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81-2159

No. .....

In the Supreme Court of the United States

OCTOBER TERM, 1981

BILL M. SILKWOOD, Administrator of the Estate of KAREN G. SILKWOOD, Deceased,
Appellant,

VERSUS

THE KERR-McGEE CORPORATION,
a Delaware Corporation, and
THE KERR-McGEE NUCLEAR CORPORATION,
a Delaware Corporation,
Appellees.

On Appeal from the United States Court of Appeals for the Tenth Circuit

APPENDIX TO JURISDICTIONAL STATEMENT PART II

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[APPENDIX]

[Filed August 16, 1979]

IN THE UNITED STATES DISTRICT COURT FOR THE WESTERN DISTRICT OF OKLAHOMA

BILL M. SILKWOOD, Administrator of the Estate of Karen G. Silkwood, deceased,	)	
Plaintiff,	)	CIV-76-0888-Theis*
vs	)	
KERR-McGEE CORPORATION, ET AL., Defendants.	)	

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OPINION AND ORDER OVERRULING DEFENDANTS' POST-TRIAL MOTIONS

THEIS, Chief Judge.

This is a personal injury action for damages caused through exposure to radiation suffered by plaintiff's decedent as a consequence of plutonium escaping a nuclear fuel processing plant operated by defendants. A lengthy jury trial culminated May 18, 1979, in a jury's answers to interrogatories finding actual damages of $505,000.00 and

* Theis, Chief Judge of the District of Kansas, sitting by designation of the Tenth Circuit Court of Appeals as a judge of the Western District of Oklahoma.

punitive damages of $10,000,000.00. The jury's answers also indicated liability of both defendants on strict liability and also on the basis of defendants' negligence. The Court accepted the verdict and on June 21, 1979, entered judgment in accordance therewith.

This matter now comes before the Court on defendants' alternative motions for judgment notwithstanding the verdict or for a new trial. Twenty-two separate grounds are alleged to support these motions. For the reasons stated herein, the Court finds these motions without merit and denies defendants their requested relief.

From the date this lawsuit was filed a dramatic divergence of perspective has existed regarding what the issues in this case are, how those issues arise in this suit, and the applicable legal standards that control their resolution. This manifest, often emotionally-charged disagreement has survived the pretrial and trial stages of the litigation, causing numerous heated objections over otherwise elementary rulings on discovery questions, admission of evidence, content of jury instructions, and the propriety of any determination of defendants' liability for damages, especially in the instant amounts. This disagreement has once again made itself apparent in the post-trial motions of defendants.

Because defendants' misconception of the legal issues presented in this case permeates many aspects of the post-trial motions before the Court, the Court must make certain prefatory remarks, even though this litigation is in its most advanced stages. These remarks may put in better perspective the true import of this Court's many evidentary rulings and the instructions given the jury, and may help illuminate several aspects of defendants' arguments otherwise not readily apparent. It is of singular importance for this Court to emphasize clearly what defendants argue and the legal theories upon which these arguments are premised.

From the outset of this litigation, defendants' perception of the basis upon which this lawsuit was brought has

differed from the narrow issues presented in the pleadings. This was a personal injury action for damages caused through escape of plutonium from defendants' facility. This was not an intentional tort case. In defendants' strenuous and lucid arguments on these motions, counsel repeatedly stated that the trial of this action utterly failed to address "what this case was supposed to be all about" — to establish how plutonium came to be in Karen Silkwood's apartment. This Court simply does not agree.

In this case plaintiff sought to establish that culpable conduct of defendants permitted plutonium to escape from the Cimarron nuclear fuel reprocessing facility operated by defendants, and that this plutonium caused injury to Silkwood. How plutonium, once outside the plant, came into Silkwood's apartment is an issue quite distinct from how it escaped the facility.

Implicit in virtually all defendants' arguments in these motions is the suggestion that plaintiff ought not to recover unless he can demonstrate that an agent of Kerr-McGee actually deposited plutonium in Silkwood's apartment. The Court is well aware of the public speculation that has surrounded the facts of this case and the various theories of covert conspiracies advanced to explain intentional conduct that brought plutonium into Silkwood's apartment. Neither public speculation nor charges of conspiracy or intentional contamination, however, formed any part of plaintiff's claim in this trial. The sole issue before this jury was whether defendants were responsible or liable for the plutonium's escape and whether Silkwood was injured as a result of that escape. This Court ruled that defendants would be held strictly liable for any injury caused through escape of defendants' plutonium, unless, of course, defendants prevailed on their defense of assumption of the risk.

Defendants' resistance to this analysis of the case is predicated upon their contention that no liability may attach solely for the escape of plutonium from their facility

and for injury caused thereby. This freedom from responsibility for negligent or non-negligent acts that permit plutonium to escape into the public domain is premised upon the purported import of the appropriate federal regulations governing the facility's operation. Defendants also premise this argument upon a narrow theory of proximate causation, under which no liability exists unless a party caused the plutonium's movement physically into Silkwood's apartment.

Defendants have here claimed that they have no common law duty to contain plutonium within the walls of their facility and thus cannot be held liable merely for permitting plutonium to escape. Defendants contend that Congress has occupied the field of nuclear regulation through its legislation in the area. Unless defendants' conduct violates appropriate federal standards, or unless defendants may be held liable under federal law, they may not be held accountable in this Court. Imposition of liability on state common law principles represents the imposition of state standards where the federal government has not deemed them necessary. Federal preemption allegedly bars application of state law liability principles. Thus, defendants claim immunity from liability for any conduct for which the federal government does not impose liability.

Alternatively, defendants argue that they are subject to strict liability on state common law grounds only where they have failed to comply with federal regulations or with their AEC license requirements. Thus, if defendants have complied with all federal regulations, they cannot be held liable for any damages caused by the operation of their facility. Plaintiff has the burden of proving defendants' license noncompliance and in cases where no specific act or regulatory violation can be affirmatively established as the cause of injury, liability would not attach, unless the doctrine of res ipsa loquitur were applicable. This argument, of course, would essentially render nugatory the application of strict liability principles.

Both arguments presume much about the nature of the federal regulation of nuclear facilities. The primary issue in this case is whether defendants may be held liable for the escape of plutonium into the public domain on state strict liability grounds or on ordinary principles of negligence. Although defendants contend that they may not be legally held accountable under state law for the instant damages, defendants have failed to note any federal law which creates a private cause of action for violations of federal regulations. Defendants do not address any statutory or regulatory provisions, or the history to the federal legislation, to support their view.

Indeed, even cursory analysis of federal law clearly establishes that Congress specifically intended that state common law principles control nuclear accident litigation. Common law duties to act with all due care exist both in the absence of specific regulatory provisions and in conjunction with the federal guidelines for operation of nuclear facilities. It is also abundantly clear that Congress specifically intended that states apply strict liability principles, if available under state law, to liability determinations. Defendants' theory of preemption is simply unsupported by law.

APPLICABILITY OF STATE COMMON LAW STRICT LIABILITY PRINCIPLES

Defendants argue in their brief and oral argument three or four basic propositions regarding federal preemption and the role of federal regulations. First, federal preemption allegedly prohibits inposition of liability except in accordance with federal law. Thus, strict liability may not be imposed unless federal law — the Price-Anderson Act — requires it. Defendants have orally argued and suggested in their brief that no liability may attach at all unless defendants have failed to comply with federal law and regulations that control their conduct. Secondly, defendants maintain that they cannot be held liable for any damages

whenever a plaintiff's exposure is within the maximum permissible exposure limits set by the Atomic Energy Commission ("AEC"(or the Nuclear Regulatory Commission ("NRC"). Third, defendants contend that substantial compliance with federal regulations bars any award of punitive damages and that the Court erred in failing to so instruct. These arguments all rest on the significance and effect of the federal Atomic Energy Act of 1954, the Price-Anderson Act, and the regulations issued pursuant thereto. A brief background is warranted.

The federal government originally reserved to itself an absolute monopoly on the development of atomic power in the Atomic Energy Act of 1946. Act of August 1, 1946, ch. 724, § 2, 60 Stat. 755. A movement developed, however, to permit private enterprise to enter the technonogical field. These efforts culminated in the enactment of the Atomic Energy Act of 1954, which abolished the governmental monopoly over nuclear technology and allowed private operation of nuclear reactors under strict AEC supervision. Act of August 30, 1954, ch. 1073, 68 Stat. 919, as amended, 42 U.S.C. §§ 2011-2281 (1970).

The concern over cost-disincentives to investment, particularly the availability and cost of liability insurance to cover major nuclear accidents, led to legislation in 1956 that provided for governmental indemnification against loss incurred through a nuclear accident. This bill was ultimately enacted in 1957 as the Price-Anderson Act. Act of September 2, 1957, Pub.L.No. 85-256, 71 Stat. 576, *codified at* 42 U.S.C. § 2210 (1970); *Duke Power Co.* v. *Carolina Environmental Study Group, Inc.*, 438 U.S. 59, 98 S.Ct. 2620, 2625-26, 57 L.Ed.2d 595 (1978); see generally, Note, *The "Extraordinary Nuclear Occurrence" Threshold and Uncompensated Injury Under The Price-Anderson Act*, 6 Rutgers-Cam.L.J. 360, 362-64 (1974). Originally effective for only ten years, the Price-Anderson Act has since been twice extended and is now effective until 1987. Act of October 13, 1966. Pub.L. No. 89-645, 80 Stat. 891; Act of December 31, 1975, Pub.L. No. 94-197, § 4, 89 Stat. 1111.

Defendants contend that this federal legislation has occupied the field and prohibits imposition of liability except where federal law expressly so provides. Defendants have further orally argued that Congress never intended that state rules of strict liability be applied to actions for personal injury arising out of federally licensed nuclear facility operations. These statements are so palpably contrary to the legislative history of these acts that they hardly warrant serious argument.

Prior to the enactment of the Price-Anderson Act in 1957, Congress intended that *all* questions of liability for radiation injuries be submitted for determination under state tort law. The Supreme Court stated in *Duke Power Co.* v. *Carolina Environmental Study Group, Inc.*, supra, 98 S.Ct. at 2639 n. 33:

> "Appellees' only relevant right prior to the enactment of the Price-Anderson Act was to utilize their existing common-law and state-law remedies to vindicate any particular harm visited on them from whatever sources."

Chairman Anderson of the Joint Committee on Atomic Energy spoke during the 1975 hearings on the need for renewal of the Price-Anderson provisions. He stated that without Price-Anderosn's requirement that state common law defenses to liability be waived.

> "[e]stablishing liability would depend in each case on state tort law and procedures, and these might or might not provide for no-fault liability."

Hearings on H.R. 8631 before the Joint Comm. on Atomic Energy, 94th Cong., 1st Sess., 69(1975), *quoted in Duke Power Co.*, supra, 98 S.Ct. at 2639.

The congressional reports issued in conjunction with the Price-Anderson Act stated that whether or not liability existed in any case was to be determined according to the applicable state law. S.Rep. No. 296, 85th Cong., 1st Sess., 9,

reprinted in [1957] U.S.Code Cong. & Admin. News at 1803, 1810; HR.. Rep. No. 435, 85th Cong., 1st Sess., 9 (1957). When Congress passed the first extension of Price-Anderson in 1966, it similarly indicated that state law would control liability determinations. S.Rep. No. 1605, 89th Cong., 2d Sess., 3-4, 6-10, *reprinted in* [1966] U.S.Code Cong. & Admin. News at 3201, 3206-10. The AEC also agrees that liability determinations under Price-Anderson are made under applicable state law. *AEC Staff Study of the Price-Anderson Act: Part I*, 16 Atomic En.L.J. 205, 224 (1974).

Numerous commentators have unanimously concluded that Price-Anderson left the issue of liability determinations to state law. Comment, *Radiation and Preconception Injuries: Some Interesting Problems in Tort Law*, 28 S.W.L.J. 414, 427 (1974); Note, *The "Extraordinary Nuclear Occurrence" Threshold and Uncompensated Injury Under the Price-Anderson Act*, supra, at 364; Green, *Nuclear Power: Risk, Liability and Indemnity*, 71 Mich.L.Rev. 479, 496 (1973); England, *Nuclear Insurance and the Price-Anderson Act*, 13 Atomic En.L.J. 27, 33 (1971); Green, *Safety Determinations in Nuclear Power Licensing: A Critical View*, 42 Notre D.L. 633, 646 (1968); Cavers, *Improving Financial Protection of the Public Against the Hazards of Nuclear Power*, 77 Harv.L.Rev. 644, 648, 650 (1964); Estep and Adelman, *State Control of Radiation Hazards: An Intergovernmental Relations Problem*, 60 Mich.L.Rev. 41, 42 (1961); Comment, *Nuclear Liability Legislation in the United States and Europe*, 13 Stan.L.Rev. 865, 866 (1961); Note, *Recent Statutes*, 71 Harv.L.Rev. 750, 752 (1958).

Nor did the Price-Anderson Act mean to supplant the application of state tort liability to a nuclear accident of lesser magnitude which fails to qualify as an "extraordinary nuclear occurrence" within the terms of the Act. Recovery for a nuclear accident not covered by the Act was contemplated by Congress solely according to applicable state law, without the benefit of the Act's provision for waiver of state defenses. S.Rep. No. 1605, 89th Cong., 2d Sess., 6-10, *re-*

printed in [1966] U.S.Code Cong. & Admin. News at 3206-08; see also Comment, *The Irradiated Plaintiff: Tort Recovery Outside Price-Anderson*, 6 Environ.L. 859, 861 (1976); Note, *The "Extraordinary Nuclear Occurrence" Threshold and Uncompensated Injury under the Price-Anderson Act*, supra, at 367 (1974).

In enacting Price-Anderson, Congress considered and rejected the adoption of a federal tort statute based on absolute liability for nuclear power. *Duke Power Co.*, supra, 98 S.Ct. at 2627; Comment, *Radiation and Preconception Injuries: Some Interesting Problems in Tort Law*, supra, at 427. Congress provided instead that in the event of a major nuclear accident, federal law would establish a waiver of defenses to state common law claims for damages. This approach was deemed preferable both for the sake of simplicity and to avoid complicated problems of tort law. Thus, Price-Anderson sought to deal only with certain problems in existing state law that impair the ability of radiation-injured plaintiffs to recover on state law. Price-Anderson "[left] undisturbed the remaining body of the law." S.Rep. No. 1605, 89th Cong., 2d Sess., 10, *reprinted in* [1966] U.S. Code Cong. & Admin. News at 3210.

Indeed, defendants impliedly concede that the federal government has not preempted from nuclear accident cases the applicability of state law liability principles. Although defendants fail to address the apparent disparity, they have vigorously argued that state workmen's compensation principles must control recovery in this case. Defendants contend that the instant facts fall within that state statute's provisions for determination of liability and damages, and that state law must therefore be applied.

This Court agrees that if the facts warrant it, state workmen's compensation law applies. S.Rep. No. 296, 85th Cong., 1st Sess., 18, *reprinted in* [1957] U.S.Code Cong. & Admin. News at 1819; see also, Hutton, *Workmen's Compensation and Radiation Injury*, 12 Vand.L.Rev. 145 (1958);

Finks, *Radiation Injuries Compensable Under Workmen's Compensation*, 41 B.U.L. Rev. 183 (1961); Estep and Allen, *Radiation Injuries and Time Limitations in Workmen's Compensation Cases*, 62 Mich.L.Rev. 259 (1963). Defendants argue further, however, that when a claim does not fit within state compensation law, it may not be brought on another appropriate state law ground — whether strict liability or negligence — because federal law has occupied the field and foreclosed the application of state law. This argument is curiously inconsistent, unexplained and not distinguished.

Defendants further contend that application of state common law strict liability principles to determine the question of their instant liability conflicts with the Price-Anderson Act and with the general purposes of the federal energy programs. Lest there be any confusion on this point, the Court must note that both Houses of Congress expressly preferred that state strict liability principles be used to resolve liability determination in such cases. In its report on the first amendment and extension of the Price-Anderson Act, the Senate stated:

> "The question whether courts should apply legal principles akin to those of strict liability in the event of a serious nuclear incident seems to the committee to be free from dispute. The existing Price-Anderson system rests on the assumption that such principles will be so applied. All who have testified before the Joint Committee during the past 2 years have agreed that such principles should apply in such a case."

S.Rep. No. 1605, 89th Cong., 2d Sess., 9, *reprinted in* [1966] U.S.Code Cong. & Admin.News at 3209; see also S.Rep. No. 296, 85th Cong., 1st Sess., 9, *reprinted in* [1957] U.S.Code Cong. & Admin.News at 1810.

Indeed, the Price-Anderson Act was enacted largely because of Congressional concern that certain states might not be willing to apply strict liability principles to claims

arising from nuclear incidents. By adopting the waiver provisions of Price-Anderson, Congress therefore directed that the equivalent of strict liability principles must be applied, at least in major nuclear accidents within the definition of "extraordinary nuclear occurrences" covered by the Act. See *Duke Power Co.*, supra, 98 S.Ct. at 2627, citing S.Rep. No. 1605, 89th Cong., 2d Sess., 6-10, *reprinted in* [1966] U.S.Code Cong. & Admin.News at 3201; Proposed Amendments to the Price-Anderson Act relating to Waiver of Defenses, *Hearings Before the Joint Comm. on Atomic Energy*, 89th Cong., 2d Sess., 5 (1966); *AEC Staff Study of the Price-Anderson Act: Part I*, 16 Atomic En.L.J. 205, 224 (1974).

It should come as no surprise that authorities commenting on the subject have concluded with virtual unanimity that strict liability would be applied to actions seeking recovery for radiation injuries caused by the operation of a nuclear facility. These authorities include the first major treatise written on the topic, a work cited and relied upon by defendants to support their own contention that federal legislation occupies the field and precludes imposition of "stricter standards" than those applied by the federal government. Stason, Estep, and Pierce, *Atoms and the Law*, at 637 (1959) ("it would seem that certain aspects of that [nuclear] industry will in all probability become subject to [strict liability's] financial burden").

Indeed, these authors hypothesized a situation where special nuclear materials escape from a nuclear fuel reprocessing plant without a chain reaction incident — a factual situation remarkably similar to the instant case. The authors suggested that case law in 1959 was inconclusive, but they speculated that because the incident involved nuclear material, a court might well impose the rule of strict liability. Id. at 702.

From the first year of private involvement in nuclear power to the present time, commentators have similarly concluded that the application of strict liability to these

facts is both justified and to be anticipated. Becker and Huard, *Tort Liability and the Atomic Energy Industry*, 44 Geo.L.Rev. 58, 68 (1955) ("Quite conclusively, under one guise or another, liability without fault for injuries caused by the escape of radiation will be imposed on the owner or operator of a nuclear reactor"); Cable and Early, *Torts and the Atom: The Problem of Insurance*, 45 Ky.L.J. 3, 20, 28 (1956) (generally assumed that strict liability will apply); Freedman, *Nuisance, Ultrahazardous Activities and the Atomic Reactor*, 30 Temp.L.Q. 77 (1957); Frampton, *Radiation Exposure — the Need for a National Policy*, 10 Stan.L.Rev. 7 (1957); Stason, *Tort Liability for Radiation Injuries*, 12 Vand.L.Rev. 93 (1958); Seavey, *Torts and Atoms*, 46 Cal.L.Rev. 3, 8 (1958); Comment, *Nuclear Liability Legislation in the United States and Europe*, 13 Stan. L.Rev. 865, 866 (1961) (little doubt that operator will be held strictly liable); Cavers, *Improving Financial Protection of the Public Against the Hazards of Nuclear Power*, 77 Harv.L.Rev. 644, 653, 664 (1964); England, *Nuclear Insurance and the Price-Anderson Act*, 13 Atomic En.L.J. 27, 33 (1971) (Congressional proponents found it difficult to imagine strict liability would not be applied); Note, *The "Extraordinary Nuclear Occurrence" Threshold and Uncompensated Injury Under the Price-Anderson Act*, supra, at 370; Comment, *Nuclear Torts: The Price-Anderson Act and the Potential for Uncompensated Injury*, 11 N.Eng.L. Rev. 111, 120-22 (1975); Comment, *Radiation and Preconception Injuries: Some Interesting Problems in Tort Law*, 28 S.W.L.J. 414, 433 (1974); Comment, *The Irradiated Plaintiff: Tort Recovery Outside Price-Anderson*, 6 Environ.L. 859, 884 (1976); Comment, *The Plutonium Society: Deterrence and Inducement Factors*, 41 Alb.L.Rev. 251, 269 (1977) (strict liability "certainly applicable"); Prosser, *Law of Torts*, § 78 at 516 (4th ed. 1971); Harper and James, *Law of Torts*, at 812 (1st ed. 1956); Restatement (Second), *Torts*, § 520, com.g.h. (1976) (§ 519 strict liability for abnormally dangerous activities applicable to nuclear power), Cf. Keys and Howarth, *Approaches to Liability for Remote Causes:*

The Low Level Radiation Example, 56 IowaL.Rev. 531, 546 (1971) (whether strict liability applies to low level radiation injury not resolved).

Defendants also object to the application of strict liability in the instant case because the injured party was an occupational worker who "assumed the risk" of this type of injury. See Restatement (Second), Torts, § 523 (1976). It was uncontested in this case that Silkwood was contaminated at home in her apartment, an estimated twenty miles from the nuclear plant site. The jury was unable to find that Silkwood intentionally carried the plutonium from work to her apartment, and no evidence was introduced of any other way in which the contamination could have been work-related. As an occupational worker, Silkwood did not assume the risk of off-site contamination unrelated to her employment.

No authority supports this Court's excluding from application of strict liability workers who, during their private lives and away from their work, are exposed to radiation that coincidentally originates from their place of employment. Away from their employment these workers stand as any other member of the public. Kerr-McGee's argument that plaintiff had the burden of proving that the incident was not work-related overlooks the fact that this issue is an affirmative defense. The Restatement itself entitles § 523 "assumption of the risk," a defense that must be affirmatively pleaded and proved by defendants under federal rules. See Restatement (Second), Torts, § 523, com. a (1976); Rule 8, Federal Rules of Civil Procedure.

Defendants contend that the application of strict liability is in conflict with federal energy legislation unless imposed in a situation where defendants have failed to comply with federal regulations controlling the facility. It is important to understand the thrust of this argument. In essence, defendants here contend that except in the event of their noncompliance with federal regulations, they are

absolved from, and therefore immune against, any liability whatsoever for damages caused through their operation of a nuclear facility.

If defendants contend that without noncompliance, application of strict liability conflicts with federal policy, but that application of negligence principles does not, they draw a distinction without foundation in the law. Nowhere is authority cited or logic or reason adduced to support the idea that imposition of strict liability somehow is inconsistent with federal law, while the imposition of ordinary negligence to determine liability for the same conduct is not. This Court cannot discern any reason for such a distinction.

What defendants indirectly argue, of course, is that any determination of their liability — whether it be through application of state law principles of strict liability or negligence — is inconsistent with federal law unless defendants have violated a specific federal statutory or regulatory provision. This is made apparent in defendants' argument that their compliance with government regulation is conclusive evidence of non-negilgent conduct. Thus, absent noncompliance with federal regulations, liability could not be imposed on a negligence theory either.

This brings the Court to an analysis of defendants' contention that federal regulations alone control liability determinations, and that these defendants may not be held liable absent a showing of a regulatory violation. The import of the contention and the theory upon which it rests must be made clear. Proceeding by way of example may prove illuminating.

Defendants' evidence and arguments in the trial of this case demonstrated that federal regulation and regulatory guidelines would permit .5 grams of plutonium to escape their facility without detection, even assuming complete compliance with federal regulations and perfect operation of all detection equipment. Thus, a single worker who left

the facility building twice per day could remove without detection, 1 gram of plutonium per day, or 1 pound of plutonium over approximately 19 months. Two workers could achieve the same result in less than a year. Regulations controlling inventory difference would permit this facility to have approximately nine or ten pounds of plutonium unaccounted for, so loss of this one pound could easily go unnoticed. A Kerr-McGee witness characterized the implications of this 1 pound of plutonium in the public domain as "sheer havoc and death." Even the potentially very grave dangers of one half gram of plutonium in the public domain were agreed upon by virtually all witnesses. For this "sheer havoc and death" Kerr-McGee would claim freedom from responsibility and liability because of federal preemption. Congress, of course, intended no such thing.

As noted above, Congress clearly and indisputably indicated in its consideration of the Price-Anderson Act that state law would govern liability determinations for nuclear accidents in all actions. This was true whether or not the indemnification and waiver provisions of Price-Anderson were applicable, and whether state law would apply the strict liability principles under the Restatement of Torts, the strict liability principles of *Rylands* v. *Fletcher*, 3 H.&C. 774, 159 Eng.Rep. 737 (Ex. 1865), *rev'd*, L.R. 1 Ex. 263 (1866), *aff'd*, L.R. 3 H.L. 330 (1868), or ordinary principles of negligence. Quite simply, there is no preemption problem when Congress manifests its intent that state law play this specific role in the liability scheme.

The underlying thrust of defendants argument is that Congress intended these principles of state law to apply only if a violation of the federal regulations is first demonstrated. It is quite clear that Congress intended no such effect be afforded these administrative regulations, and the commentators have so agreed. Defendants' citation to preemption cases is inapposite where those cases deal with states that impose upon the nuclear licensee a standard of conduct that conflicts with the federal scheme and thus

frustrates its effectuation. Application of state principles of liability for injury caused by conduct both within and in violation of the regulatory standards is consistent with the federal scheme.

APPLICABILITY AND EFFECT OF GOVERNMENT REGULATIONS

Having decided that federal preemption does not bar imposition of liability under state law, the Court must address the effect of federal regulations on the judgment of defendants' conduct by the jury. As the Court understands their argument, defendants raise four separate contentions in this regard. For simplicity of exposition, it is helpful to separate the appropriate regulations and license requirements into two different groups — those relating to the conduct and operation of the facility, the "operational regulations," and those which set the maximum permissible exposure limits for different workers, the "exposure limit" regulations.

Defendants first have argued that substantial compliance with "operational regulations" bars recovery of actual damages, both because it prohibits imposition of strict liability, as discussed above, and because it is conclusive evidence of non-negligent conduct to bar a claim of ordinary negligence. Alternatively, defendants argue that substantial compliance with these operational guidelines must bar any award of punitive damages. Both arguments address whether liability may be imposed on defendants for operating their facility in such a way that plutonium might escape into the public domain. Defendants contend that when they do all that the government requires, they cannot be considered negligent and, *a fortiori*, cannot be found willfully reckless.

Defendants' arguments on the "exposure limit" regulations address the separate issue of whether damages may be imposed for the escape of plutonium in the instant case.

Defendants contend that a jury may not conclude that actual injury is inflicted for exposures below the 40 nanocurie limit for occupational workers, like Silkwood here. Alternatively, defendants argue that even if a jury finds that the instant exposure would create actual injury, a defendant may not be held liable in damages therefor because federal regulation permits it. Lastly, defendants argue that punitive damages ought not to be awardable for any conduct that has resulted in an exposure within the permissible guideline limits.

Had this Court instructed the jury that substantial compliance with governmental regulations would bar an award of actual damages in the area of nuclear power, the Court would have paved a new road in jurisprudence that heretofore has not existed in any other comparable area of the law. Liability for operators and manufacturers of aircraft represents a situation analogous to that in the instant case. The federal government has occupied the field of regulating aircraft, and no aircraft may fly in this country without a federal certification of its airworthiness. *In re Paris Air Crash of March 3, 1974*, 399 F.Supp. 732 (C.D.Cal. 1975). Nevertheless, strict liability is frequently applied under state law for injuries suffered thereby, and preemption is not considered a problem. See *In re Paris Air Crash of March 3, 1974*, supra. Actions for injuries allegedly caused by a defectively designed aircraft are not barred by reason of the FAA's certification of the craft and of its design as airworthy. See *Rigby* v. *Beech Aircraft Co.*, 548 F.2d 288 (10th Cir. 1977).

It is commonly the rule in the field of aviation law that a defendant's complete compliance with governmental safety regulations is only some evidence of the defendant's exercise of reasonable care, but it is not conclusive. Evidence of compliance is therefore admissible for consideration by the jury, but it does not bind the jury to find that a defendant's conduct was reasonable under the circumstances. *Bruce* v. *Martin-Marietta Corp.*, 544 F.2d 442, 446

(10th Cir. 1976); see also *Banko* v. *Continental Motors Corp.*, 373 F.2d 314 (4th Cir. 1966); *Prashker* v. *Beech Aircraft Corp.*, 258 F.2d 602, 605 (3rd Cir. 1958); *Citrola* v. *Eastern Air Lines, Inc.*, 264 F.2d 815, 817 (2d Cir. 1959); *Manos* v. *Trans World Airlines, Inc.*, 324 F.Supp. 470 (N.D.Ill.1971).

In a similar vein, a failure to take certain acts can be found negligent, even though the FAA regulations do not require or suggest them. *Bibler* v. *Young*, 492 F.2d 1351 (6th Cir. 1974); *Todd* v. *United States*, 384 F.Supp. 1284, 1291 (M.D.Fla.1975) (standard of reasonable care may differ from conduct imposed by safety regulation). Notwithstanding the "complex and exacting scheme of regulation[s] developed by the FAA," there is no problem of federal preemption when courts develop rules of liability and damages where the high standard of conduct consistent with the regulatory scheme has not been maintained. See *Fisher* v. *Bell Helicopter Co.*, 403 F.Supp. 1165, 1172 (D.D.C.1975). Violation of a safety regulation is, however, conclusive evidence of negligence per se. *Freeman* v. *United States*, 509 F.2d 626, 630 (6th Cir. 1975); *Todd* v. *United States*, supra.

The same principles obtain in the field of drug manufacture and distribution, another field where a governmental agency has promulgated a vast and extensive network of administrative regulations designed to insure public safety. It is typically, the rule that compliance with federal laws and regulations concerning a drug does not in itself absolve a manufacturer of liability for injury caused by that drug. *Salmon* v. *Parke Davis & Co.*, 520 F.2d 1359 (4th Cir. 1975), *citing*, 1 Frumer & Friedman, *Products Liability*, § 8.07[1]. A defendant's compliance with these government regulations is admissible before the jury as some evidence of the exercise of reasonable care, but it is not conclusive or binding on the jury. *Brick* v. *Barnes-Hines Pharmaceutical Co.*, 428 F.Supp. 496, 498 (D.D.C.1977); *Chambers* v. *G. D. Searle & Co.*, 441 F.Supp. 377, 383 (D.Md.1975) (compliance with FDA requirements on required warning not conclusive on adequacy of warning), *aff'd*, 567 F.2d 269 (4th

Cir. 1977); *Gonzales* v. *Virginia-Carolina Chemical Co.*, 239 F.Supp. 567, 575 (E.D.S.C.1965).

Thus, strict liability may be imposed on a defendant for failure to warn adequately even though full compliance with all government regulations and requirements in production and marketing is demonstrated. *Stromsodt* v. *Parke Davis & Co.*, 257 F.Supp. 991, 997 (D.N.D.1966) *aff'd*, 411 F.2d 1390 (8th Cir. 1969). See generally 1 Frumer & Friedman, *Products Liability*, § 5.04 (1979). Similarly, a manufacturer has been held liable for negligent failure to test a drug adequately under foreseeable market conditions even though federal regulations did not require any such test. A manufacturer cannot exempt itself from liability for failure to exercise due care in an area where no specific regulation requires the affirmative act. *Tinnerholm* v. *Parke, Davis & Co.*, 285 F.Supp. 432, 448 n. 12 (S.D.N.Y.1968), *citing* 3 Frumer & Friedman, *Products Liability*, § 33.01[3], *aff'd*, 411 F.2d 48 (2d Cir. 1969). The correlative rule is also applied that violation of a safety regulation constitutes conclusive proof of negligence per se. *Orthopedic Equipment Co.* v. *Eutsler*, 276 F.2d 455, 461 (4th Cir. 1960); *Griffin* v. *United States*, 351 F.Supp. 10 (E.D.Pa.1972); *Gonzales* v. *Virginia-Carolina Chemical Co.*, supra.

A recent author has commented on the issue of tort liability for microbiologists engaged in hazardous genetic mutation research under the auspices of the National Institute of Health, where strict containment of biological material is required. That writer has suggested that compliance with NIH guidelines should constitute strong evidence of non-negligent conduct in an action for injuries caused by the research. He further finds, however, that courts would likely not deem compliance entitled to a presumption of reasonable care. McGarity, *Book Review*, 27 Kan.L.Rev. 459, 466 (1979). No problems of preemption or application of a "stricter standard" under state law have been perceived in any of these areas.

Those writers who have addressed this subject in the field of nuclear facilities and radiation injuries have similarly concluded. Quoting again from the early treatise on this subject, the text writers stated:

> "[I]t seems to be agreed generally that proof of compliance with a criminal statutory or administrative standard should be accepted as some evidence of having used due care but that it ought not to be accepted as conclusive proof.
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> "The present writers feel that, in general compliance with governmental radiation regulations should be accepted in negligence cases as evidence of having acted reasonably but should not be used as conclusive proof because there are too many variables in such a rapidly developing field. We would apply this rule generally to civil statutory and administrative regulations as well as criminal."

Stason, Estep and Pierce, *Atoms and the Law*, 125, 126 (1959). Noting a New Jersey trial court decision with a different holding, the writers concluded that they were:

> "[i]nclined toward the view that proof of compliance with a safety code, whether established by unofficial experts in the field or by a statute or administrative rulings, should be treated merely as evidence of use of due care." Id. at 152.

The purpose of AEC regulations, and the posture of the government agency at the time of their promulgation, render it unwise to bestow upon these health and safety operational regulations an absolute deference as conduct reasonable under any circumstances. When the AEC initially undertook promulgation of health and safety regulations, the atomic industry was just beginning to develop. Thus, the AEC faced the unique problem of promulgating regulations in advance of the development of those problems it was intending to regulate. Additionally, a variety of dif-

ferent types of facilities existed with diverse safety and security problems, and the AEC was inexperienced in the regulation of any industrial activities. These factors made it unwise, and even impossible, for the AEC to devise a set of government rules that would cover all atomic activities. Trowbridge, *Licensing and Regulation of Private Atomic Energy Activities*, 34 Tex.L.Rev. 842, 843-51 (1956).

Sound logic supports the proposition that compliance with statutory and regulatory provisions does not necessarily lead to the inference that negligent conduct is not present.

> "[I]n a field developing as rapidly as atomic energy, particularly as to our knowledge of the injurious effect of radiation, it would be most unfortunate if statutes, administrative regulations, or decisional rules should develop hard and fast lines as to what is or is not a reasonable standard of conduct."

Stason, Estep, and Pierce, *Atoms and the Law*, supra, at 154.

This is especially true when the AEC itself acknowledges that these regulations are not static or final standards for reasonable care upon which the industry might absolutely rely without additional safety precautions. The agency itself originally recognized that atomic energy regulation would be a slow evolutionary process with an emphasis in agency regulations on encouraging private industry both to develop their own measure of self-regulation and to improve upon the standards imposed by the government. Trowbridge, *Licensing and Regulation of Private Atomic Energy Activities*, supra, at 843-51. The AEC originally announced its intention to rely on certain measures of protection that it expected industry itself to put into effect, even though the Atomic Energy Act authorized the AEC to describe in detail the required measures of protection. *Hearings on the Development, Growth and State of the Atomic Energy Industry before the Joint Comm. on Atomic Energy*, 84th Cong., 2d Sess., pt. 1 at 114-15 (1956).

The AEC still acknowledges that its regulations evolve with time and are established or modified as operational experience is gained in new plants and as further information is obtained from ongoing research and development programs. Nuclear Safety Staff, United States Atomic Energy Commission, *Regulation of Nuclear Power Reactors and Related Facilities*, 16 Atomic En.L.J. 256, 260 (1974). A Director of Regulations of the AEC has recently cited the need for continuing development of operational procedures at nuclear facilities. Muntzing, *Nuclear Standards — Licensing, Government and Industry*, 14 Atomic En.L.J. 14 (1972). Others have also noted the need for constantly improving regulations governing the handling of nuclear fuels and the AEC's own awareness of the need for better standards. Comment, *Policing Plutonium: The Civil Liberties Fallout*, 10 Harv.Civ.Rights—Civ.Lib.L.Rev. 369 (1975).

These and other reasons support the proposition that the general rule should be no different for the atomic industry. Compliance with government safety regulations should be accepted as evidence of acting reasonably, but should not be used as conclusive proof because too many variables exist in any given situation for an absolute standard to apply. Comment, *Radiation and Preconception Injuries: Some Interesting Problems in Tort Law*, 28 S.W.L.J. 414, 428 (1974).

This Court's holding conforms both to traditional principles of tort law and to the principles many anticipated would govern similar cases. Defendants' arguments have been made before and rejected by other courts in analogous contexts. It should not be surprising that one commentator described as "powerful precedent" for the radiation injured plaintiff the case of *McLane* v. *Northwest Natural Gas Co.*, 255 Or. 324, 467 P.2d 635 (1970), which involved the explosion of a natural gas storage tank. There the court rejected the contention of a heavily regulated public utility that state authorizing legislation, which expressly permitted such storage of natural gas, prohibited imposition of

strict liability. The court further rejected the utility's contention that the presence of safety regulations required a violation of some regulation before liability could be imposed. With surprising foresight, the writer aptly described these as likely defenses available to a nuclear operator, such as Kerr-McGee here. Comment, *The Irradiated Plaintiff: Tort Recovery Outside Price-Anderson*, 6 Environ.L. 859, 886-87 (1976).

The same general rule is applicable to actions for radiation injuries where a plaintiff's exposure is within the maximum permissible exposure regulations established by the AEC. These regulations are not intended to represent levels of radiation exposure at which no injury may be inflicted. Indeed, the exposure level regulations were adopted by the AEC from standards originally promulgated by the National Council for Radiation Protection and the International Commission on Radiological Protection solely as guides for good radiation practices rather than strict levels of safety. Hallmark, *Radiation Protection Standards and the Administrative Decision-Making Process*, 8 Environ.L. 785, 794, 800 (1978). Both the NCRP and ICRP have continuously emphasized that these recommendations were furnished as guides and both bodies cautioned against their adoption as rigid standards. Hansen, *Development and Application of Radiation Protection Standards*, 12 Idaho L.Rev. 1, 9 (1975). Both the AEC and the Environmental Protection Agency adopt the position that these levels are not a "safe" or threshold level below which injury does not become a possibility. Baram, *Radiation from Nuclear Power Plants: The Need for Congressional Directives*, 14 Harv. J.Leg. 905, 907 (1977).

Thus, the standards represent a balancing of social benefit against estimated cost, a calculated risk in an area where scientific knowledge of low level radiation exposure effects is insufficient to determine the precise risk actually involved. Green, *Radiation Wastes and the Environment*, 11 Nat.Res.J. 281, 292 (1971); Comment, *Survey of the*

Governmental Regulation of Nuclear Power, 59 Marq.L.Rev. 836, 843 (1976). Hallmark, *Radiation Standards and the Administrative Decision-Making Process*, supra, at 794, 808.

> "The setting of exposure standards at a given level requires the weighing of these risks and benefits to be derived therefrom. The weighing requires a value judgment as well as a measuring, and thus the standards are not scientific numbers below which no danger exists.
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> "There has been a history of disagreement with the established radiation protection standards on the part of some members of the scientific community. The basis for this disagreement has often been the fact that science has been unable to fully discover the biological effects and costs of inozing radiation. . . . This ignorance make it impossible to assess fully the risks attendant to exposure in ionizing radiation."

Crowther v. *Seaborg*, 312 F.Supp. 1205, 1231-32 (D.Colo. 1970); see also *Citizens for Safe Power, Inc.* v. *Nuclear Regulatory Comm'n*, 173 U.S.App.D.C. 317, 322, 524 F.2d 1291, 1296 (D.C.Cir. 1975) (undetermined whether exposure at guideline levels will or will not have injurious effects).

Indeed, this acknowledgement of the limitations of the regulations led to the adoption in 1970 of the concept of "as low as practicable," later changed to "as low as reasonably achievable." This additional standard imposes on licensed operators the duty to maintain the release of radioactive material to unrestricted areas as far below the regulation limits as is practicable (now reasonably achievable). Baram, *Radiation from Nuclear Power Plants*, supra, at 927-28; *AEC Staff Study of the Price-Anderson Act, Part I*, supra, at 267.

Even though the maximum permissible exposure ceiling has been frequently rendered more stringent over the years, see Rogers, *The Development and Use of Regulatory*

Standards, 14 Atomic En.L.J. 173, 178 (1972); Goodman, *Radiation Injuries*, 5 Atomic En.L.J. 20, 23 (1963), the regulations still embrace the idea that exposure within the standards pose a potential for personal injury. Green, *Nuclear Power: Risk, Liability, and Indemnity*, 71 Mich.L.Rev. 479, 481 (1972-73); Taylor, *Standards for Protection Against Radiation*, 12 Atomic En.L.J. 139, 141 (1970); Comment, *Nuclear Torts, The Price-Anderson Act and the Potential for Uncompensated Injury*, 11 n.Eng.L.Rev. 111, 113 (1975); Note, *The "Extraordinary Nuclear Occurrence" Threshold and Uncompensated Injury Under the Price-Anderson Act*, supra, at 383 (1974).

> "In view of our present lack of knowledge as to exactly how damaging small doses [of radiation] are likely to be over a long period of time, the Commission's exposure regulations cannot be said to fix definitively the point at which radiation becomes unacceptably dangerous."

Stason, Estep, and Pierce, *Atoms and the Law*, supra, at 128; see also Hansen, *Development and Application of Radiation Protection Standards*, 12 Idaho L.Rev. 1, 26 (1975) (exposure limit standards not decisive in determining liability in tort cases).

Some writers, however, have expressed their view that more deference should be paid these exposure limit regulations. In their treatise on the subject, Professors Stason, Estep and Pierce suggest that whenever someone is exposed to radiation where the amount of radiation received, or the circumstances in which it was received, do not violate the applicable health and safety regulations, compliance should be argued to prove reasonable conduct. These authors urge that where the AEC makes a deliberate judgment on the specific issue of maximum exposure levels, a judge should hold compliance with that requirement as conclusive proof of compliance with a reasonable standard of conduct. Stason, Estep and Pierce, *Atoms and the Law*, supra, at 127-28.

These authors, however, acknowledge that both major treatises on torts reject this view. See 2 Harper & James, *The Law of Torts*, § 17.6 at 1014 (1st ed. 1956); Prosser, *Law of Torts*, § 36 at 203 (4th ed. 1971), cited in *Atoms and the Law*, supra, at 129. The authors conclude that:

> "[c]ompliance or non-compliance with industry safety codes certainly should be given weight, and in most cases perhaps should constitute prima facie, if not conclusive proof, *when no evidence to the contrary is introduced*. Courts, however, should avoid a rigid rule and decide individual cases on the basis of the specific evidence produced." (Emphasis added.)

Id. at 155. At a later point in their treatise, the authors acknowledge that nuclear operators may be held liable for damages for the escape of nuclear materials, even where the amount that escapes is within the permissible governmental limits. Id. at 722.

More recent writers have also suggested that a greater deference be given governmental exposure limits, but they acknowledge that as presently written, the regulations may not be so construed. These authors suggest possible use of the government regulations as a per se defense to a latent injury radiation claim, whereby a court would find that a plaintiff has failed to establish causation of his cancer by any exposure within the permissible governmental limits. Keyes and Howarth, *Approaches to Liability for Remote Causes: The Low Level Radiation Example*, 56 Iowa L.Rev. 531, 567-69 (1975). The writers acknowledge that:

> "[a]t the present time, however, the AEC has not declared the permissible dose level standards to be absolute safety limits. Nowhere in the regulations does any such language appear. The standards are considered only to be guidelines. *Their use as a negligence-limiting factor, therefore, is severely limited.* Employees are in no way precluded from bringing suit upon

radiation exposures even well below the maximum permissible standards.

* * * *

"[The standards] are not . . . being granted any conclusive weight. Thus despite the fact that medical science feels the probabilities of direct causality are so remote between radiation at levels below the maximum prescribed standards, and a cancer or other disease, plaintiffs are not estopped from winning their cases." (Emphasis added.)

Keys and Howarth, *Approaches to Liability for Remote Causes*, supra, at 545-46.

These writers acknowledged that the standards represent a policy of balancing the benefits to society from the use of atomic energy and the possible harm to individuals from radiation. They continue:

"Implicit in this decision is the assumption that, although very slight, some harm may be possible to those exposed below the permissible standards. It is, therefore, difficult to argue that these should be a judicially noticeable standard which would serve as a per se defense through the refusal of courts to consider any possible causal link between radiation and injury."

Id. at 567.

The authors conclude that it is "unfortunate" that in radiation litigation the published radiation exposure standards are merely "some evidence" going to the weight of the evidence to be evaluated on both negligence and causation.

"However, it would not appear that this per se defense approach can be supported without amendment of the law and the present AEC regulations and manual requirements. *Mere compliance with the standards will not be interpreted as determinative of the issue of*

negligence and causation in the absence of a specific indication on the part of the promulgators of the standards that this was their intent." (Emphasis added.)

Id. at 570; see also Hamilton and Krebs, *Radiation Protection Regulation: An Opportunity for Cooperative Federalism*, 12 Vand.L.Rev. 395, 407-08 (1959) (basic problem of radiation protection is to ascertain how much exposure may be permitted; separate problem is to determine what special measures are required to provide compensation to those injured by such exposure).

In one of the few latent injury radiation cases to reach a court, the Court applied this approach. In *Mahoney* v. *United States*, 220 F.Supp. 823 (E.D.Tenn.), *aff'd*, 339 F.2d 605 (6th Cir. 1964), a radiation worker who received exposures within the governmental regulatory limits was denied recovery of damages for his cancer on grounds that he failed to prove causation between the exposure and the disease. Compliance with the guideline limits, however, was treated only as some evidence of the lack of a causal nexus. It is clear that the court did not treat the regulations as conclusive on the point.

Even the adoption of the Stason, Estep and Pierce suggestion would not aid the Kerr-McGee defendants here. As noted in the record, Silkwood's exposure took place at home in her apartment. Although her body burden constituted approximately one-fourth of that permitted by regulation for a radiation worker during her lifetime, it exceeded by two and a half times the exposure permitted to any other member of the public. The mere fortuity of her employment rendered the exposure within governmental guidelines. Any visitor in the apartment who received the same exposure would represent a clear violation of the exposure limit regulations.

It is also clear that the circumstances under which Silkwood received the exposure were not embraced by the government regulations. The ten-fold difference in stan-

dards for workers and non-workers obviously does not reflect a medical judgment that non-workers are more prone to the biological effects of radiation. Rather, the standards reflect the philosophy that a radiation worker tacitly assumes the very small risk attributed to receiving radiation doses not exceeding the currently acceptable permissible limits. Assuming that the worker is properly informed of the nature and magnitude of the risk, as far as known, the market price for labor needed to induce workers to accept the occupational hazard should be commensurate with the risk. The market price of labor essentially compensates the worker for taking the risk. See Keys and Howarth, *Approaches to Liability for Remote Causes*, supra, at 542.

Silkwood, of course, did not assume in her occupation the risk of the contamination of her apartment. Nor were her employment wages designed to compensate her for any possible radiation exposure to which she might be subjected by a Kerr-McGee accident unrelated to her work at the plant. The jury in this case failed to find proof that the plutonium was carried by Silkwood from the facility. In essence, no showing was here made that Silkwood's contamination was an "occupational hazard" the risk of which an employee customarily assumes. Thus, the argument for application of the higher permissible exposure regulations for workers fails under these conditions. Even were these standards entitled to conclusive effect, in all likelihood the Court could not have so instructed the jury in the instant case.

Little further need be said on this Court's failure to instruct the jury that substantial compliance with government regulations would bar an award of punitive damages. The existence of wanton conduct depends upon the actor's or tortfeasor's mental attitude at the time of the conduct. *Tappen* v. *Ager*, 599 F.2d 376, 382 (10th Cir. 1979). The culpable mental attitude necessary for punitive damages was set forth in the punitive damage instruction. For the same reason that mere compliance with government regu-

lations cannot necessarily be found consistent with the reasonable person standard, so too it cannot necessarily be found consistent with an attitude and conduct devoid of that state of mind for which an award of punitive damages is appropriate.

As in the drug and aviation cases noted above, a manufacturer may be found to have duties in addition to or different from those prescribed by regulation. A mere failure to act as a reasonable person in conformity with that duty would constitute negligence. A knowing and intentional disregard of that duty might under some circumstances constitute the gross recklessness and indifference to the safety of others that render punitive damages appropriate.

No one could argue, for example, that a manufacturer who knew that its drug would cause blindness would not be responsible for punitive damages for knowingly marketing that product for profit, even though the drug had been approved for distribution and marketing after compliance with all FDA regulations. Similarly, no one would question the propriety of punitive damages assessed against an airplane manufacturer who, for example, knew that its plane was defectively designed and could crash during flight, notwithstanding that the manufacturer had complied with all government regulations and obtained an FAA certificate for the craft as airworthy. Cf. *Tinnerholm* v. *Parke Davis & Co., supra* (FDA testing requirements for drug failed to reveal drug's ability to cause injury; liability imposed); *Gillman* v. *Admiral Corp.*, 523 F.2d 102 (6th Cir. 1975) (television manufacturer liable for punitive damages where evidence showed knowledge of grave danger to safety and failure to redesign or warn).

Similarly, Kerr-McGee's argument that compliance with regulations would still permit the escape of small quantities of plutonium overlooks the circumstances where punitive damages might be appropriate for damages caused through that escape. Surely defendants would not argue that puni-

tive damages would be inappropriate if a nuclear licensee knew of the time and manner of the plutonium's escape, but did nothing to prevent it because the regulations did not require it. Similarly, if a licensee were aware of defects within its facility that would render likely repeated exposures of employees to plutonium, but did nothing to correct it, as some evidence in this case indicated, punitive damages might be considered, regardless whether government regulations required those changes to be made. The character of the conduct and the state of the actor's mind control the propriety of punitive damages, and not merely whether that conduct complies or fails to comply with a government regulation. See Restatement, *Torts* § 908(2) com. e at 556-57 (1939).

Defendants argue that the Court's instructions would result in imposition of punitive damages on a defendant who relied on the government standards in good faith. This is not the case. Good faith belief in, and efforts to comply with, all government regulations would be evidence of conduct inconsistent with the mental state requisite for punitive damages. Defendants placed this matter in issue and introduced evidence in this regard. Defendants were free to argue their good faith conduct in operating their facility safely. The jury was instructed to judge that conduct in light of the standards for the imposition of punitive damages. Had the jury believed this evidence, an award of punitive damages would not have been appropriate. Defendants' argument that their conduct could not have been so found, based on the record, will be dealt with below.

Defendants' argument that no liability for actual damages may be imposed when a plaintiff's exposure is within governmental regulatory limits has been shown to be erroneous. Defendants' further argument that no punitive damages may be awarded on these facts similarly misses the point. Punitive damages in this case were awarded for conduct that caused or permitted the escape of plutonium and led to the contamination of Silkwood in her apartment. The jury was so instructed.

Had this Court held that punitive damages could not be awarded unless exposure limit regulations were exceeded, the Court would have committed serious error. Such an instruction would bar punitive damages in situations where a defendant might intentionally violate every federal regulation controlling the operation of the facility, a condition where authorities agree a defendant would be found negligent per se. Comment, *The Irridated Plaintiff: Tort Recovery Outside Price-Anderson*, supra, at 872; Prosser, *Law of Torts*, § 36 at 200 (4th ed. 1971); Stason, Estep and Pierce, *Atoms and the Law*, supra, at 119 (violation of a statutory or administrative standard makes a prima facie case of lack of due care). If a defendant knowingly and grossly violated these operational regulations and thereby permitted a large quantity of plutonium to escape, punitive damages would be properly submissible to the jury, even if only a limited exposure to one person within the guidelines were shown.

The Court should add a few general comments on defendants' preemption arguments to focus on and clarify different aspects of those arguments that are not always clearly raised. Defendants' argument against the application of strict liability or negligence absent a violation of government regulations embraces the proposition that because the government has legislated in the area, it has occupied the field and precluded application of state liability principles. As demonstrated above, Congress clearly had no such intention.

More troublesome, however, is defendants' related contention made explicit at oral argument on these motions that they had no duty to contain plutonium within their facility, other than that imposed by federal law, to protect members of the public from this dangerous substance. Unless federal law imposed the obligation, and presumably unless federal law imposed liability for its breach, defendants are allegedly immune for any damages caused by the escape of plutonium.

This proposition is, of course, legally unsupportable. As noted above, these defendants had a duty under part 20 of Title 10 of the Code of Federal Regulations to maintain the release of radiation "as low as reasonably achievable." Compliance with this standard cannot be demonstrated merely through control of escaped plutonium to within any absolute amount. See *York Committee for a Safe Environment* v. *United States Nuclear Regulatory Comm'n*, 174 U.S.App.D.C. 29, 527 F.2d 812 (D.C.Cir.1975). It is, therefore, not inconsistent with any Congressional design to impose liability upon defendants for actual damages for escape of plutonium caused by negligence or lack of reasonable conduct. Nor is it inconsistent to impose punitive damages for the escape of plutonium caused by grossly negligent, reckless and willful conduct. Common law duties also exist for the breach of which liability may be imposed, as discussed above.

The additional contention apparently underlying defendants' primary arguments that no liability may be imposed outside Price-Anderson is likewise indefensible. This argument would suggest the anomaly that by insuring application of strict liability and adequate insurance coverage for major disasters, Congress peculiarly conferred immunity on operators for lesser nuclear accidents where, for example, actual damages and total deaths did not exceed $5,000,000. See 42 U.S.C. § 2210(n) (Supp. 1979); 10 C.F.R. § 140.85(a) (1974).

This argument would also imply that Congress left the entire nuclear industry immune for whatever catastrophic occurrence it caused subsequent to the Atomic Energy Act of 1954, and prior to the adoption of Price-Anderson three years later. Immunity would still exist today for those nuclear facilities, perhaps including fuel reprocessing plants like defendants' here, to which provisions of Price-Anderson do not apply. 42 U.S.C. § 2210(n)(1) (Supp. 1979); see also *AEC Staff Study of the Price-Anderson Act, Part II*, 16 Atomic En.L.J. 297, 304 (1975); England, *Nuclear Insur-*

ance and the Price-Anderson Act, 13 Atomic En.L.J. 27, 48-49 (1971). The enormity of the implication of even the suggestion of the proposition dispels any serious consideration. Congressional history conclusively refutes this contention. See S.Rep. No. 296, 85th Cong., 1st Sess., 9, *reprinted in* [1957] U.S.Code Cong. & Admin.News at 1810.

Imposition of common law liability is thus consistent with the virtually unanimous legal analysis and expectation extant in both legal and industrial communities. This Court instructed that compliance with regulations would be very strong, if not conclusive, evidence that punitive damages were not appropriate. Substantial compliance was entitled to strong consideration to the same end. These instructions adequately reflect the law on the facts of this case and, if anything, were overly generous to the defendants.

Defendants never came forward with those regulations with which they claimed substantial compliance. There was evidence of regulatory noncompliance. A Kerr-McGee witness during the trial conceded that the defendants' inventory difference, or the amount of plutonium unaccounted for by the defendants at their facility, slightly exceeded that permitted by regulation. An NRC official called by defendants testified that he did not feel that Kerr-McGee was conforming its conduct to the "as low as reasonably achievable" standard. Dr. Karl Morgon, a plaintiff's witness, testified that Silkwood's exposure did not conform to ICRP guidelines and part 20 of the federal regulations for an exposure received within a single year, even though Silkwood's burden was within the regulation limits for a lifetime exposure.

Other regulations control defendants' conduct in the instant situation. They forbid a licensee from possessing, using or transferring plutonium in such a manner that radiation levels in unrestricted areas could exceed prescribed levels. 10 C.F.R. §§ 20.105(b), 20.106(a) (1974). Although

the parties disagree, the record contains some evidence that the level of plutonium in Silkwood's apartment may potentially have exceeded that permitted in an unrestricted area, such as a residence.[1]

The general question of how much compliance should be considered "substantial" is, of course, an undefinable factor ultimately left to the wisdom of the jury in its judgment of defendants' operation of their facility. One plaintiff's witness, Dr. Morgon, offered his opinion that if rated or graded for their operation of the Cimarron facility, defendants should receive an "F" or failing grade. One defense witness, a regional director of the NRC, himself stated that the facility would in his judgment receive a "C." The question for the jury was to judge the relevant operations of the plant as defined in the instructions solely on the basis of the evidence before them and in light of the standards given by the Court for negligent, or for reckless and wanton conduct.

It was a factual question solely for the jury to compare defendants' conduct with the regulatory standard and decide whether the record demonstrated "substantial," "minimal" or "bare" compliance, or noncompliance of whatever degree. In the last analysis, however, the jury must still compare this factual finding of the defendants' conduct with the legal standards appropriate for liability for negligence or for punitive damages. All the relevant evidence was

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[1] The applicability of this specific regulation was first addressed by the parties by way of letter to the Court after argument on these motions. Compliance with this specific regulation was not argued during the trial. In their letters to the Court, the parties could not agree on the factual question of whether compliance was demonstrated by the record. Since the issue of compliance with this regulation came up as an anonymous number in the trial but was not specifically addressed in the evidence or law before the jury, it is an extraneous issue for the purpose of the Court's decision on the extant motions, even though latent in the total evidence and law governing this case.

before the jury and the jury was required by law to measure that against the applicable legal standards. Defendants do not disagree with the legal standards, but rather disagree with the factual finding reached by the jury in judging defendants' conduct against the standards.

Defendants propose in their "substantial compliance" criterion an inflexible standard unknown elsewhere in tort law and unpermitting of just application to any variety of different factual situations. It imposes upon the Court the additional, onerous burden of instructing the jury on an indefinitely large number of unspecified and complicated regulations. The Court must then inform the jury that "substantial" compliance with these regulations bars absolutely any award of punitive damages. Whether any regulation is entitled to greater weight than others is left unclarified. Artificial erection of this undefinable, absolute barrier against punitive — or even actual — damages would be an invasion of the proper function of the jury inconsistent with the role of administrative regulations in assessment of a defendant's exercise of due care.

Indeed, defendants' strenuous reliance on the cloak of "substantial compliance" as an absolute defense against actual or punitive damages is rather anomalous. It is predicated, presumably, on the idea that the escape of 300 micrograms of plutonium from their facility does not represent "substantial" noncompliance with federal regulations. Yet defendants apparently do not maintain that federal regulations authorize the distribution of 300 micrograms of plutonium into each of various random households in the public domain. Defendants' absolute theory of "substantial compliance" would also apparently bar punitive damages even where a licensee intentionally and maliciously planted this plutonium in a household. The instant amount would simply not represent a "substantial" violation of any regulations. Such a standard improperly diverts the jury's focus from considerations properly germane to the determination

of whether punitive damages are appropriate. The Court correctly chose not to instruct the jury in such a manner.

APPLICABILITY OF WORKMEN'S COMPENSATION LAWS

Defendants in substance raise two arguments why workmen's compensation laws allegedly apply to the plaintiff's claim to bar its assertion on common law grounds in federal court. First, defendants contend that the mere coincidence of the nature of defendants' business enterprise and the type of injury suffered is sufficient to render applicable the Oklahoma compensation statute. This Court has already disposed of this contention in an earlier order in this case dated December 12, 1978. The Court will not again address it at length here.

The authority cited in the prior order, as well as the cases relied upon by defendants in their brief in support of this motion, indicate that a causal connection between work and injury must exist before compensation laws apply. The mere coincidence that the injury for which suit is brought is the same type as that to which the plaintiff exposes herself at work is insufficient to demonstrate this causal nexus. Even when the individual sued is fortuitously the plaintiff's employer the causal connection is still absent. Neither coincidence establishes that the injury has been suffered as a causal result of the plaintiff's employment.

Demonstrative examples are appropriate. Under defendants' reasoning, a public utility worker who coincidentally installs gas furnaces could not sue the utility at common law if his own furnace exploded at home. A worker at a television manufacturer similarly could not sue that company if his defective television exploded at home. So, too, a nuclear worker would be unable to sue her employer for radiation injury suffered on vacation by driving through a spill of uranium by that company on a public highway. In each example, the causal nexus is ab-

sent. The Court need look no further than defendants' own authority to reject the proposition asserted.

Defendants' second argument is built upon the first. Defendants contend that when the coincidence of defendant and injury exists, a plaintiff has the burden of pleading and proving affirmatively that the causal connection does *not* exist. Because the plaintiff would be entitled to a presumption under the compensation laws that the injury arose out of and during the course of employment in an action brought under that act, it is argued that defendants are entitled to the protection of that presumption in an action not brought on compensation laws. Because in Oklahoma compensation plaintiff may arguably prevail without showing specifically how the injury was work-related, plaintiff may not bring a common law action unless he proves that the injury was not work-related. In situations like the instant case, where no jury finding establishes the fact either way, a plaintiff may not recover at common law, even though defendant might otherwise be strictly liable without any such showing.

Quite simply, there is no authority that supports such a proposition. Defendants have not cited any authority, nor has the Court found any. Defendants' citation to Kansas law and *Wilburn* v. *Boeing Airplane Co.*, 188 Kan. 722, 366 P.2d 246 (1961), is unavailing. There is nothing in Kansas law that would compel a plaintiff to prove as an element of his common law claim the non-existence of an affirmative defense available to the defendants. Adoption of the argument would constitute a new horizon in the traditional field of tort litigation.

Application of this proposition also frustrates application of strict liability in typical product liability suits for an entire class of plaintiffs who have an employment relationship with the defendant. In the example above, an administrator for the deceased utility worker would be required to prove that the furnace did not explode as a part of his employment. Again, lest the Court overindulge in

hypothetical example, twenty nuclear workers exposed to plutonium away from work while shopping individually in a store could not recover unless they demonstrated how the plutonium got into the store, even though no evidence is introduced which of the twenty, if any, brought plutonium into the store. Non-workers could recover on strict liability grounds without any similar showing.

Reason does not support segregation of these particular plaintiffs from the rest of the world merely because of the fortuity of their employment relationship to a defendant and the similarity of the hazard involved. The Oklahoma compensation statute expressly and unequivocally restricts the operation of any presumption to actions brought *under* that act. Quite clearly, the workmen's compensation bar is an affirmative defense that the employer must raise in each of the hypothetical examples noted above. Defendants cannot here place on plaintiff the burden of proof of the non-existence of facts supporting their defense.

Contrary to the defendants' arguments, and as they well know, the compensation issue was indeed submitted to the jury, and the factual finding was against the defendants. It was the Court's determination that a formal workmen's compensation issue could not be presented to the jury without an involved dissertation on the nature and purpose of compensation laws, their difference from traditional common law tort claims, and the real possibility such an instruction would confuse the jury and thwart the process of justice. Actual submission was made to the jury by submission of the specific factual issue of whether Silkwood intentionally took plutonium to her apartment. Here the jury found the defendants' evidence insufficient to establish by a preponderance of the evidence that Silkwood intentionally took plutonium to her apartment. The evidence that Silkwood might have accidentally taken the plutonium home on her person or clothing was weak, speculative, and contradicted by virtually all defendants' own evidence. The Court could not properly submit a question with no evi-

dentiary foundation to the jury. Nothing more was required to avoid the defense that compensation laws barred the instant claim.

Defendants argue that if Silkwood's contamination took place during the collection of a urine sample, then it took place during the course of her employment. This again merely begs the question on which defendants had the burden of proof. The only evidence that the contamination so occurred was Silkwood's own speculation. That alone was insufficient.

Indeed, in the Rule 51 conference this Court specifically asked defense counsel whether they contended the plutonium moved into Silkwood's apartment inside a contaminated urine kit. This Court was considering whether to send that issue to the jury, but upon counsel's unqualified negative response the Court refrained. Defendants did not then object and the Court will not now hear them raise this claim by indirection after an adverse verdict. See *United Steelworkers* v. *CCI Corp.*, 395 F.2d 529 (10th Cir. 1968).

CHALLENGES TO THE VERDICT

Defendants here contend that the verdict in this case is both excessive and contrary to the weight of the evidence and accordingly should be set aside. On the latter ground, defendants argue that a verdict must be granted for defendants.

The question whether a new trial is proper because the verdict is contrary to the weight of the evidence is normally a question of fact and is addressed to the sound discretion of the trial court. *Champion Home Builders* v. *Shumate*, 388 F.2d 806 (10th Cir. 1967). On a motion for new trial, the Court should view the verdict in the overall setting of the trial, consider the character of the evidence and the relative complexity of the legal principles which the jury was bound to apply. The Court should abstain

from interfering with the verdict unless it is quite clear that the jury has reached a seriously erroneous result. *Bevevino* v. *Snydjari*, 574 F.2d 676 (2d Cir. 1978). Where the trial court is of the opinion that a new trial is proper, however, the remedy should be granted. *Holmes* v. *Wack*, 464 F.2d 86 (10th Cir. 1972).

From examination of the record and familiarity with the evidence at trial, the Court finds that the evidence was more than adequate to sustain the verdict reached. Defendants' argument that the only evidence in the record supports the view that Silkwood intentionally removed the plutonium is unavailing. Jurors are the exclusive judges of credibility and of the weight to be given the testimony of any witness. *Boehm* v. *Fox*, 473 F.2d 445 (10th Cir. 1973); *Jaeco Pump Co.* v. *Inject-O-Meter Mfg. Co.*, 467 F.2d 317 (10th Cir. 1972). The jurors were free to reject that evidence altogether, or find it speculative and unconvincing. With the burden of proof on that issue, defendants then fail in their affirmative defense. Similarly, defendants unconvincingly argue that the evidence conclusively shows that Silkwood's intentional removal of plutonium was the most probable of all possibilities. This misconstrues the nature of defendants' burden.

Defendants had the burden of proving their defense as a true fact by a preponderance of the evidence — that is, that it was likelier true than not true. Defendants' argument subtlely misdirects the analysis and finds that burden satisfied if one possibility is likelier true than is another possibility, regardless whether it is likelier true than not true. Needless to say, one improbable possibility may be more probably true than another, while both are so improbable that neither is established as likelier true than not. Defendants' proposition would embrace within jury findings the potential for total speculation and conjecture.

A trial judge has the chief responsibility for passing on the question as to whether a new trial ought to be

granted on the ground of excessive or inadequate damages. *Ryen* v. *Owens*, 144 U.S. App. D.C. 332, 446 F.2d 1333 (D.C. Cir. 1971). A verdict should not be set aside unless the Court is convinced that it is the result of bias, prejudice or passion. *Metcalfe* v. *A.T. & S.F. Ry.*, 491 F.2d 892 (10th Cir. 1974); *Wells* v. *Colorado College*, 478 F.2d 158 (10th Cir. 1973).

It is this Court's considered opinion that the verdict in this case does not fall within that category. Nor is the verdict beyond all reason or so great as to shock the Court's conscience. See *Williams* v. *Steuart Motor Co.*, 161 U.S. App. D.C. 155, 494 F.2d 1074 (D.C. Cir. 1974). While the award of actual damages in this case was high for the short period involved, and perhaps greater than this Court would have himself imposed, it is not so clearly excessive that the Court finds it an injustice or unacceptable based upon the evidence.

With the evidence and all reasonable inferences to be drawn therefrom viewed in the light most favorable to plaintiff, see *Ahern* v. *Veterans Administration*, 537 F.2d 1098 (10th Cir. 1976); *Joyce* v. *Davis*, 539 F.2d 1262 (10th Cir. 1976), the record contains substantial evidence to support the jury verdict for actual damages. So viewed, the record presents a Kafka-like picture of a young woman who was contaminated by an originally unknown amount of plutonium that was inexplicably found in her apartment. She was fearful of a slow death from cancer, became hysterical at times, and approached a nervous breakdown as she became the focus of federal agency and industry investigations into the incident. Because of the uniqueness of her injury, she was compelled to place herself for medical care in the custody of those whom she distrusted. The mental anxiety associated with this experience was for the jury to measure, together with whatever physical injury the jury found she suffered.

Where experts are in sharp disagreement over the injuries sustained, the Court must not try the case de novo. *Volis* v. *Puritan Life Ins. Co.*, 548 F.2d 895 (10th Cir. 1977). This Court is uninclined to stray into the province of the jury and examine their finding based upon conflicting evidence. See *United States* v. *79.95 Acres of Land, Rogers County, Oklahoma*, 459 F.2d 185 (10th Cir. 1972).

The Court is even less inclined to view the punitive damages awarded in this case as excessive. Defendants argue that the Tenth Circuit has held a ratio of punitive to actual damages of 11 to 1 as excessive, and that *a fortiori*, the ratio of 20 to 1 in the instant case is excessive. This argument is entirely misplaced. Reliance on *Dearmore* v. *Gold*, 400 F.2d 887 (10th Cir. 1968), fails to note that it was a per curiam opinion setting aside a damage award and remanding for a new trial as both parties desired. A jury had awarded only $841.54 actual damages, where uncontroverted evidence established damage at more than $700, without pain and suffering, and established unquestioned pain and suffering and probable future medical expense. Punitive damages of $10,000 were awarded. Without delving into the jurors' thinking, but noting the appellee's argument that the jury awarded out-of-pocket expenses as actual damages, and pain and suffering and future expenses as punitives, the Court concluded the fairest disposition to be a new trial.

Indeed, application of a ratio approach to excessiveness expressly contradicts Oklahoma law. Defendants implicitly acknowledge this by quoting *Misco Leasing, Inc.* v. *Keller*, 490 F.2d 545 (10th Cir. 1974) — punitive damages may exceed actual damages as long as the amount is reasonable and bears some relation to the injury inflicted. Defendants' Brief at 29. Defendants' argument that the punitive verdict must bear some relation to the actual damages awarded misreads the quote and contradicts Oklahoma law. A punitive award need *not* bear any necessary rela-

tion to the actual damages awarded. *Garland Coal & Mining Co.* v. *Few*, 267 F.2d 785, 791 (10th Cir. 1959).

By statute, a relationship need only exist between the amount of punitive damages awarded and the *injury* inflicted. Okla.Stat.Ann. tit. 23, § 9. Little imagination is needed to discern the disparity between actual and punitive damages where, for example, a defendant inflicts a very serious injury, but where the suffering from that injury is terminated by an intervening and unforeseeable act of God. Punitive damages would be for intentional infliction of an injury severe enough to cause long term suffering. Punitive damages would only be required to bear a relationship to that injury inflicted, and not to the figure for actual damages that reflect the lesser period for pain and suffering actually experienced.

Defendants additionally argue that no punitive damages were justified on the instant record because no evidence was introduced of any defendants' act toward Silkwood that was reckless, wanton or malicious. This belies the point. Although defendants here disagree, Kerr-McGee had a duty to keep plutonium within their facility. Reckless, wilful, and wanton conduct in the operation of the facility so as to permit plutonium to escape into the public domain is evidence of conduct that permitted the infliction of the instant injury to Silkwood. The Court has addressed defendants' contention above that no such duty existed. Defendants' contention that permitting plutonium to escape, without more, cannot be the proximate cause of Silkwood's injury is addressed below.

Plaintiff's evidence established substantial, credible evidence of poor training, poor security, workers who knew of a variety of ways to remove large amounts of plutonium from the facility without detection, workers indifferent to the hazards of plutonium, and much more, all of which tended to establish the propriety of a punitive award. There was conflicting evidence, however subject to credibility

tests, of an uninformed or indifferent management. The amount of the punitive award was particularly within the province of the jury to decide in light of the purpose of punitive damages, the character of defendants' conduct, the hazardous nature of plutonium, and defendants' knowledge and state of mind. See Restatement, Torts, § 908(2) com. e at 556-57 (1939). In short, crassness of conduct may govern the amount of award commensurate with a defendant's financial ability.

The Court finds ample evidence in the record, if found credible by the jury, to support a very large punitive award. The Court will not set aside the verdict reached.

In a memorandum overruling defendants' motion to interrogate the jurors post-trial, the Court has already noted the high caliber and representative characteristics of the individual jurors, as well as their dedication to their duties as jurors. The jury in this case deliberated for four days and once sought guidance from the Court. Neither the verdict's size nor the conduct of the deliberations reflect a passioned or biased view of the evidence or reaction to trial tactics of the competent counsel on either side. Consequently, the Court cannot characterize the verdict as the product of passion, bias or prejudice. Finally, while the amount of the punitive award may have exceeded what the Court would have allowed. It appears to be within the confines of the evidence and the tenets of applicable law. As such it neither represents an injustice nor shocks the conscience of the Court on the instant record.

PUBLICITY

The Court finds no merit whatever in defendants' contention that pre-trial, trial and post-trial publicity deprived these defendants of the opportunity for a fair trial. The Court fails to see the relevance of post-trial publicity to defendants' argument that the trial was less than fair. Defendants cannot maintain that after the trial concluded, the

fairness of that completed process, or the deliberations of a jury already discharged, were somehow altered by subsequent statements in the press.

Nor does the Court look favorably on defendants contention that pre-trial publicity was so pervasive and prejudicial that a fair trial was impossible. The Kerr-McGee defendants themselves urged upon this Court an early trial date, even over the opposition of plaintiff. Defendants expressed their readiness to proceed to trial in early Spring in Oklahoma City, so that the lengthy trial would not have to be delayed until the next available date on this Court's calendar in the Fall. Defendants never mentioned that pretrial publicity potentially still in the minds of jurors chosen from the panel might prejudice either of the parties. Nor did these defendants do the obvious if they felt that pretrial publicity, which was largely four years old, posed a threat to the fairness of the proceedings. Fully aware of the publicity generated by the case, both locally and nationwide, defendants never moved for a change of venue for trial and never communicated to the Court serious apprehension about the pre-trial publicity concerning the case. Indeed, it was the sense of the Court that defendants were well pleased with the Oklahoma City trial situs.

Furthermore, the Court permitted an extensive voir dire of the jury panel that lasted from early morning until late that same evening. Counsel were permitted to conduct their own voir dire and inquire into each potential juror's familiarity with the case, his or her knowledge, state of mind, and personal predilections, if any. Never once prior to or during the trial did counsel suggest the possibility that pre-trial publicity posed a threat to the fairness of the trial. Defendants' desire to raise this issue after an adverse verdict detracts from the seriousness with which the Court considers it.

This Court also finds no merit in defendants' argument that publicity of this trial and other nuclear acci-

dents, most notably the incident at Three Mile Island, prevented a fair trial. Again, this Court repeatedly admonished the jury on a daily basis to disregard any debate or discussion of other events or issues bearing generally on nuclear power. This Court specifically addressed the Three Mile Island incident and cautioned the jury that it had nothing to do with the facts and issues before them. The jury was admonished not to view the movie "China Syndome" and not to let any aspect of the nuclear debate affect their deliberations on the narrow issues of this trial.

The Court has no reason to believe that the admonitions were not heeded. Upon the Court's inquiry, the jury forewoman indicated that no extraneous information or issues entered into the jury's deliberations. The Court early in the trial questioned two jurors regarding possible friendships with Kerr-McGee employees not revealed during voir dire. The Court then learned that one juror even refused to let a friend approach her whom she erroneously believed had begun work for Kerr-McGee after the trial commenced. The Court finds its admonitions sufficient to preserve in these jurors that objective and impartial state of mind necessary for a fair trial.

Quite simply, this Court presided over this trial and was fully aware of the nature and extent of news coverage in the Oklahoma City area. The Court simply disagrees with defendants' rather flamboyant description of the public interest in this trial. The press did report certain items of evidence not admitted before the jury which held prejudicial value for the defendants. The press also reported on numerous occasions, however, the parade of information regarding defendants' contentions on evidence relating to sex and drugs, which was information highly prejudicial to the plaintiff.

Defendants' suggestion that this Court poll the jury after each news report of a nuclear incident without even the remotest connection or relevance to the issues in this case or the evidence being placed before the jury is un-

realistic. Although the news accounts may have had bearing on the general national debate upon the potential benefits and costs of nuclear power, the jury was cautioned repeatedly during voir dire, presentation of evidence, and again in the Court's instructions, that any specific aspect of the public debate on nuclear power must not be considered by them. This Court's inquiry of the jury forewoman shortly after the trial's conclusion dispels any notion that prejudicial effects of publicity entered into the jury's deliberations. The few statements of individual jurors and alternates that appeared in local Oklahoma City newspapers immediately after the trial corroborate this view. This Court is convinced that media publicity had no effect on the proceedings of the trial.

OTHER ARGUMENTS

Although the Court will not address each issue raised by defendants, additional comment is necessary on a few points. Defendants again raise their contention that the scope of the evidence was improper, and that the Court erred by excluding their evidence on numerous matters regarding Silkwood's sexual involvements, use of drugs, and purported suicide attempts. The Court entered in the record a memorandum order on this point, which adequately deals with the issue. In their arguments defendants never addressed the problem that Rule 404, Federal Rules of Evidence, rendered this evidence largely inadmissible, without regard to its tremendously prejudicial value upon which this Court chose to exclude it under Rule 403, Federal Rules of Evidence.

The parties should also consult *Hackbart* v. *Cincinnati Bengals*, Inc., 601 F.2d 516 (10th Cir. 1979), wherein a professional football player sought damages for a "late hit" by an opposing player which broke his neck. Defendants introduced evidence tending to show that plaintiff himself was a "dirty player" who had indulged in physical violence beyond that permitted by the rules. The Circuit

held the evidence irrelevant and improperly admitted by virtue of Rule 404's proscription on character evidence used to show conduct.

Defendants again argue that evidence of their negligent or reckless handling of plutonium in the facility was irrelevant to the issues in the case. Defendants refuse to acknowledge that evidence of defendants' lack of due care regarding security, training of workers, or their indifference to the hazards of plutonium and the safety of their employees, renders it more likely that the instant plutonium escaped from the facility because of defendants' ordinary or gross negligence. The evidence was, therefore, probative and competent circumstantial evidence of culpable conduct that proximately caused Silkwood's injury.

Hackbart, supra, is not to the contrary. The Court there found irrelevant evidence of extraneous acts of football violence in an intentional tort case. Once the Court rejected the applicability of the assumption of the risk defense, evidence that football was a commonly recognized "violent game" did not have any probative value on defendants' liability for a player's admittedly intentional striking of plaintiff.

Defendants also argue that they are entitled to a judgment or a new trial because no evidence establishes any act which proximately causes Silkwood's injury. Defendants must concede that but for the escape of plutonium from their facility, this injury would not have occurred. Nor may they dispute that radiation injury to individuals in their homes was a foreseeable result of the escape of plutonium barely visible to the naked eye. Defendants' theory of proximate causation would presumably require evidence that their agent brought plutonium physically into the apartment. In strict liability "dangerous animal" cases this would require a defendant to be responsible for moving the animal physically to a plaintiff's location before liability would attach. This is not the law. *City of Magnum* v. *Brownlee*, 181 Okla. 515, 75 P.2d 174 (1938) (bear

escapes from cage); see also Foster and Keeton, *Liability Without Fault in Oklahoma*, 3 Okl.L.Rev. 1, 11-16 (1950).

Furthermore, defendants' argument is another attempt to shift the burden to plaintiff to prove the absence of Silkwood's assumption of the risk to bar a strict liability claim, or the non-existence of an intervening cause sufficient to cut off the chain of causation requisite for a negligence claim. This, too, is not the law. Indeed, intervening acts do not bar liability under the Restatement provision, except possibly for the intentional acts of a third party. See Restatement (Second) Torts, § 522 (1976).

The difficulty of proving causation in radiation injury cases has been the subject of much legal debate, but only in the context of latent injuries where a plaintiff with cancer sues another for exposures occurring long previously. See, e.g., Keys and Howarth, *Approaches to Liability for Remote Causes: The Low Level Radiation Example*, supra at 545-46; Finks, *Radiation Injuries Compensable Under Workmen's Compensation*, 41 B.U.L.Rev. 183 (1961); Estep, *Radiation Injuries and Statistics: The Need for a New Approach to Injury Litigation*, 59 Mich.L.Rev. 259, 281-304 (1960); Note, *Problems of Tort Liability Arising from Nuclear Reactors*, 27 U.Cin.L.Rev. 415, 418 (1958). That problem is admittedly not present here. Plutonium from the defendants' facility was found in Silkwood's apartment where it exposed her to radiation and was proximately tied by evidence to her emotional distress. The question of proximate causation was properly submitted to the jury.

Defendants lastly raise the question of misconduct by the plaintiff's lead trial counsel that allegedly deprived them of a fair trial. This was a very long, hotly contested lawsuit wherein the parties pursued the litigation perhaps as much out of emotional belief in various principles as they did out of interest in this specific factual situation. At times the patient and tempers of lawyers wore thin,

as would be expected. There were infrequent instances, perhaps, of excesses that ought not to have occurred. Mr. Spence's remark to a defense witness, a long-time government investigator who interpreted the statement as designed to intimidate him, was unfortunate. The Court has no doubt, however, that this particular witness would not have been intimidated by a private lawyer's casual remark during a trial recess. Mr. Phillip's demeanor during cross-examination exhibited not the slightest feature of intimidation, as the Court would anticipate from an experienced man in his profession.

The Court need not address other alleged instances of improper conduct. Defendants themselves began this case with an opening statement that informed the jury that plaintiff's lead counsel was skilled in the art of "invading the vaults" of large corporations and insurance companies and "denuding them" of their money. Defendants closed with argument directly contradicting the Court's instructions and informing the jury that punitive damages should be considered as a reward to plaintiff's counsel and the estate they represented. In direct violation of court orders, defense counsel also brought to the jury's attention a matter whose exclusion this Court had ordered both several times from the bench and once by way of written memorandum inserted in the record and distributed to counsel. Neither plaintiff nor defendants are entitled to claim pristine innocence in their courtroom conduct in this case.

Invariably when counsel become so involved in matters of principle so strongly held by clients, better professional judgment in questions of fact and law may be overcome by momentary impulse. The result is not always a salutary one in strict terms of trial performance, but lengthy, complicated trials with much at stake are difficult to present without at least occasional obstructions of professional perspicacity. This is especially true when the

litigation is motivated by emotionally-fueled devotion to a client's principled position, which might perhaps cloud a more objective perception of the case.

This Court presided over the trial and did its utmost to keep prejudicial matters and conduct from the jury. The Court undertook appropriate action to erase whatever possible prejudicial impact might have been created whenever a counsel's conduct or tactics approached unfairness or impropriety in the Court's opinion. The Court is quite confident that these rare occurrences during the course of eleven weeks of trial did not have any ultimate impact on the jury in this case. This was not a perfectly tried case by either side, but neither the federal rules nor the requirements of due process dictate as much. It was the Court's apprehension during the trial and reflected judgment now that this case, although having more evidentiary questions than any the Court has previously tried, more adversariness than customarily occurs in a normal civil case, and inordinate length of trial time, was well and competently briefed, tried and argued by exceeding competent counsel for both sides. This Court maintained close scrutiny over the progression of this litigation and feels satisfied that the interests of all parties were adequately protected. The argument that conduct of plaintiff's counsel prevented a fair trial in this action is without merit.

The Court also finds no merit to the remaining contentions of defendants, many of which this Court has already ruled and commented upon during the preparation of this case for trial or during the trial itself.

IT IS THEREFORE ORDERED that the motions of defendants for a judgment notwithstanding the verdict or for a new trial are hereby denied.

At Wichita, Kansas, this 16th day of August, 1979.

(s) *Frank G. Theis*
United States District Judge

APPENDIX

THE COURT'S INSTRUCTIONS

INSTRUCTION NO. 1

MEMBERS OF THE JURY:

Now that you have heard the evidence and the arguments, the time has come to instruct you as to the law governing the case.

Although you as jurors are the sole judges of the facts, you are duty bound to follow the law as stated in the instructions of the Court and to apply the law so given to the facts as you find them from the evidence before you.

If, in these instructions, any rule, direction or idea be stated in varying ways, no emphasis thereon is intended by me and none must be inferred by you. For that reason, you are not to single out any certain sentence or any individual point or instruction and ignore the others, but you are to consider all the instructions as a whole, and you are to regard each instruction in the light of all the others.

You are not to be concerned with the wisdom of any rule of law. Regardless of any opinion you may have as to what the law ought to be, it would be a violation of your sworn duty to base a verdict upon any other view of the law than that given in the instructions of the Court.

INSTRUCTION NO. 2

This is an action to recover for alleged personal injuries arising out of the radioactive contamination to which plaintiffs decedent, Karen Silkwood, was exposed in November, 1974. Karen Silkwood was an employee of defendant Kerr-McGee Nuclear Corporation and worked at that defendant's fuel rod fabrication plant — the Cimarron facility. She was exposed to plutonium, a radioactive substance, on three consecutive days — November 5th, 6th and 7th, 1974. Plutonium contamination was found in her apartmen on November 7th.

It is stipulated by the parties that the plutonium that caused Silkwood's contamination originally came from the Cimarron facility, and plaintiff alleges that the operation of a nuclear fuel rod fabrication plant is an ultra-hazardous or abnormally dangerous activity. Plaintiff therefore alleges that Kerr-McGee Nuclear Corporation is strictly liable to compensate plaintiff for his decedent's injuries and damages caused by the escape of this plutonium from the facility. Plaintiff claims that Silkwood suffered injuries, including radioactive contamination of her internal organs, tissues and genes, and that she experienced mental and emotional trauma, suffering and anguish.

Plaintiff also alleges Kerr-McGee Nuclear Corporation was negligent with respect to Karen Silkwood in the following respects:

1. Failure to inform itself of the full extent of the hazardous nature of plutonium.
2. Failure to inform and train its employees regarding the hazardous nature of plutonium.
3. Failure to protect employees and others against hazards created by the escape of plutonium from the plant.
4. Failure to employ an adequate number of trained and qualified health and safety personnel.
5. Failure to employ adequate security procedures, equipment and personnel to prevent escape of plutonium.
6. Failure to take those steps reasonably necessary to avoid contamination incidents, to minimize harm from incidents that did occur, and to account for all plutonium in its possession so that escape of the substance could be immediately detected and prevented.

Plaintiff also alleges that Kerr-McGee Nuclear Corporation is the mere instrumentality or alter ego of its parent corporation, Kerr-McGee Corporation, and that the parent corporation may therefore be held liable for the damages that plaintiff seeks.

Plaintiff claims actual damages in the amount of $1,505,000.00 for actual bodily injury and for injury to property. Plaintiff further claims the conduct of defendant companies was so grossly negligent, malicious, and wantonly reckless toward Silkwood and others as to entitle him to recover $..... in exemplary damages from defendants.

Defendant Kerr-McGee Nuclear Corporation denies that it was negligent in any manner in its operation of the facility, and further denies that any conduct attributable to it caused the escape of plutonium from the facility and the contamination of Karen Silkwood. The Nuclear Corporation further raises an affirmative defense that Silkwood herself intentionally carried the plutonium in question to her apartment and there contaminated herself either inadvertently or intentionally. The Nuclear Corporation therefore denies its liability for any damages allegedly caused to Silkwood.

Defendant Kerr-McGee Corporation denies that the Nuclear Corporation is its alter ego or a mere instrumentality. Kerr-McGee Corporation alleges that the Nuclear Corporation is a separately maintained corporate entity. Kerr-McGee Corporation therefore denies liability for any torts, or wrongs, committed by its subsidiary corporation.

Both defendant corporations deny the nature and extent of all personal damages alleged by plaintiff; except the parties have stipulated that the amount of property damage suffered by plaintiff's decedent from contamination to personal property in her apartment is $5,000.00.

The above and foregoing are the claims of the parties herein, and are not to be construed by you as evidence in the case.

INSTRUCTION NO. 3

The burden is on the plaintiff in a civil action such as this to prove every essential element of his case by a preponderance of the evidence.

Similarly, if you find that plaintiff has proved all elements of his case, then the defendants have the burden to prove by a preponderance of the evidence their affirmative defense of self-contamination.

If the proof fails to establish any essential issue in a case upon which the burden of proof is on the asserting party, then such party must lose on that issue.

To "establish by a preponderance of the evidence" means to prove that something is more likely so than not so. By a fair preponderance of the evidence is not necessarily meant the greater number of witnesses, or the length of the presentation of testimony, but rather, the greater weight of the evidence taken together — that is, that evidence upon any question or issue which convinces you most strongly of its truthfulness. If the evidence on an issue is equally balanced, then there is no preponderance and the party having the burden to establish that issue must fail.

INSTRUCTION NO. 5

Burden of proof means burden of persuasion. A party who has the burden of proof on an issue must persuade you that his claim regarding that issue is more probably true than not true. In determining whether he has met this burden you will consider all the evidence, whether produced by plaintiff or defendants.

For plaintiff to recover against Kerr-McGee Nuclear Corporation, the burden of proof is on the plaintiff to establish the three elements of his case as listed in Instruction No. 7.

For plaintiff to recover against Kerr-McGee Corporation, plaintiff has the burden of proof to establish these same three elements. Additionally, plaintiff has the burden of proof to establish that Kerr-McGee Nuclear Corporation is the instrumentality of its parent corporation, as defined in a separate instruction.

Finally, the plaintiff has the burden of proof to establish the nature and/or extent of the claimed personal injuries and property damage to plaintiff's decedent, and generally the amount of actual and punitive damages, subject to your final power to determine the amount of dollar damages in one or both categories of damages.

If you find these elements established, then the burden of proof is on defendant Kerr-McGee Nuclear Corporation to establish that Karen Silkwood took the plutonium from work to her apartment where she was allegedly injured.

INSTRUCTION NO. 6

You are instructed that plaintiff is relying in this case on a theory of liability against defendants that is known as strict liability. Such theory of liability is one that comes about by operation of law through public policy for the protection of people who live in a society where they may be affected by someone else's operation of an ultra-hazardous or abnormally dangerous activity.

The rule of strict liability applies only to harm that is within the scope of the abnormal risk that is the basis of the liability. The liability arises out of the abnormal danger of the activity itself and the risk it creates of harm to those in the vicinity. In the case at bar the activity would be the handling and processing of plutonium, one of the most dangerous of substances. The rule is founded upon a policy of law that imposes upon anyone, who for his own purpose creates an abnormal risk of harm to his neighbors, the responsibility of relief against that harm when it does in fact occur. The defendants' enterprise, in other words, is re-

quired to pay its way by compensating for the harm it causes because of its special, abnormal and dangerous character. The liability is not in any way based upon any intent of the defendant to do harm to the plaintiff or to affect his interest — nor is it based upon any negligence either in attempting to carry out the activity itself in the first instance, or in the manner in which it is carried on. The defendant is held liable although he has exercised the utmost care to prevent the harm to the plaintiff that has ensued from the dangerous substance.

INSTRUCTION NO. 7

You are instructed that the Court finds as a matter of law that the operation of the Cimarron facility by defendant Kerr-McGee Nuclear Corporation constitutes an abnormally dangerous activity. Therefore, if you find that the damage to the person or property of Karen Silkwood resulted from the operation of this plant — if that damage was caused by the escape of plutonium from that plant — then defendant Kerr-McGee Nuclear Corporation is liable for this damage, unless defendant prevails on its affirmative defense set forth below.

As the elements of his case then, plaintiff must establish by the evidence:

1. That plutonium escaped from the custody of the Kerr-McGee Nuclear Corporation's Cimarron facility;

2. The plutonium that so escaped caused Karen Silkwood actual injuries to her person or property; and

3. The nature and extent of the injuries.

As stated in the stipulation of fact, element number 1 above has been agreed to and admitted by the parties, leaving only elements 2 and 3 to be established by the evidence.

Once these facts are established, liability for this injury exists. This is true without regard to the degree of care with which defendant Kerr-McGee Nuclear Corporation carried on its activities at the Cimarron facility.

The liability of defendants, or either of them, under the doctrine of strict liability, is, of course, subject to the jury's determination of the self-contamination defense of Kerr-McGee as set forth in the following paragraph.

You are further instructed that a verdict for both defendants must result if Kerr-McGee Nuclear Corporation has proved by a preponderance of the evidence its affirmative defense that Silkwood intentionally removed plutonium from the Cimarron facility, and as a result thereof negligently or intentionally contaminated herself.

INSTRUCTION NO. 8

The fact that plaintiff's legal theory of liability or recovery against defendants Kerr-McGee Corporation and Kerr-McGee Nuclear Corporation is in legal parlance or language referred to as "strict liability," does not mean in any sense that plaintiff can recover because he files a lawsuit and claims strict liability as the basis of his legal theory.

INSTRUCTION NO. 9

The plaintiff's other claim of liability of the defendants in this case is negligence.

As used in these instructions, negligence is the lack of that degree of care as would be exercised by a very careful, prudent and competent person under the same or similar circumstances. It is the failure of a person to do something that a very careful or prudent person would do, or the act of a person in doing something that a very careful or prudent person would not do, measured by all the circumstances then existing.

To constitute actionable negligence three elements are necessary and must concur. First, the existence of a duty on the part of the party charged; second, failure of said party to perform that duty; and third, injury to the party charging the negligence and which proximately results from such failure.

A proximate cause of an injury is a cause which in direct, unbroken sequence produced the injury. It is one without which the injury would not have occurred.

Because the operation of the Cimarron facility by the defendant Kerr-McGee Nuclear Corporation constitutes an abnormally dangerous activity, a duty of utmost due care is placed upon Kerr-Mcee Nuclear Corporation by the law.

By "utmost due care" the law means that the defendant is required to exercise a degree of caution that corresponds to the riskiness of the activity. For an abnormally dangerous activity every known foreseeable precaution must be taken.

In the context of the evidence in this case on the issue of negligence, you may find that escape of plutonium from the Cimarron plant caused Karen Silkwood's injury, without finding that it was specifically foreseeable that Karen Silkwood in particular would be injured by an escape of plutonium. It is enough for proximate cause for you to find that it was foreseeable that the escaped plutonium would injure anyone who would be exposed to it.

INSTRUCTION NO. 10

Evidence has been admitted in this case regarding the existence of government standards for the operation of the Cimarron facility and the accounting for plutonium within the facility. You are instructed that these standards may be considered by you as evidence of expert opinion on what constitutes reasonable care on the part of defendant Kerr-McGee Nuclear Corporation. You may consider this evidence as any other expert testimony and it is to be

tried by the same tests. It should receive such weight and credit as you, the jury, deem it entitled, when viewed in connection with all the other facts and circumstances of the case. Its weight and value are questions for you to decide.

You may consider compliance with these standards as evidence of the exercise of reasonable care by Kerr-McGee Nuclear Corporation and to negative a finding of the conduct necessary to establish a basis for exemplary damages. Failure to comply with these standards, however, may be considered by you as negligence per se, that is, such conduct in and of itself shall be considered by you as negligence, or the failure to exercise reasonable care. Either a single incident of gross and/or wanton disregard, or a series of acts of negligence, per se, may also be considered in judging conduct necessary to impose exemplary damages.

You are instructed, however, that you are not bound by these standards. Your duty is to determine what constitutes the exercise of reasonable care in handling plutonium, or the existence of reckless and wanton conduct, in light of the physical characteristics of that material and the risks associated with it.

INSTRUCTION NO. 11

Evidence has been admitted in this case regarding the existence of government standards for the acceptable levels of exposure to radiation permitted in such facilities in regard to plant safety and evaluation of the nature and extent of personal injury. You are instructed that these standards may be considered by you as evidence of expert scientific and medical opinions on what levels of exposures may result in actual physical injuries, of whatever severity, to persons who work in such facilities. You may consider this evidence as any other expert opinion, and you should give it such weight and credit to which you deem it entitled, when viewed in connection with all other facts and circumstances.

You are instructed, however, that you are not bound by these standards. Compliance with such standards does not necessarily mean injury cannot occur for which liability may be imposed. Your duty is to determine according to your own best judgment, in light of all the evidence, the nature and extent of the actual injuries suffered by Karen Silkwood, if any, and the emotional suffering and anguish proximately caused thereby, if any.

INSTRUCTION NO. 12

One of the defendants' principal contentions and defense in this case to both negligent conduct or conduct meriting an award of exemplary damages is that Kerr-McGee Nuclear Corporation has always, and in particular at the time of events in this case, been in substantial compliance with its license and AEC regulations pertaining to its Cimarron plant.

You are instructed that substantial compliance with the license conditions imposed by the Atomic Energy Commission in the defendants' license and the regulations of the Atomic Energy Commission as they pertain to Karen Silkwood and her exposure to plutonium on November 5, 6 and 7, 1974, may be considered by you in determining whether or not the defendant, Kerr-McGee Nuclear Corporation was negligent in its plant operations, directly causing the claimed injuries to Silkwood. You may further consider compliance or substantial compliance in determining whether exemplary damages should be awardable against the defendants, or either of them, and the amount thereof.

As stated before in these instructions on the effect of government standards, such compliance would not necessarily preclude a finding of blameworthy conduct under all the facts and circumstances shown by the evidence.

[APPENDIX]

INSTRUCTION NO. 13

Plaintiff was permitted in his case in chief to present evidence of several statements of Karen Silkwood and evidence relating to her activities from September to November, 1974. This evidence was admitted primarily through the testimony of Jean Jung, whose deposition was read to you, the testimony of union officials Steven Wodka and Tony Mazzochi, and the playing of certain tape recordings of Karen Silkwood's conversations and scientific lectures that Silkwood attended. Slides of Silkwood's notebooks containing her observations of events and conditions at the Cimarron facility were displayed, and the original notebooks were admitted as exhibits for you to examine.

The evidence was comprised of Silkwood's statements to AEC investigators, union officials, and her own allegations of unsafe working conditions at the plant, and purported falsification of quality assurance records for fuel rod manufactured at the plant. It was not admitted to prove, and must *not* be considered by you as evidence of the conditions or events at the Cimarron facility they purport to describe. The truth or falsity of Silkwood's allegations or charges is not in issue in this case.

This evidence was introduced solely to show Silkwood's knowledge and state of mind at the time the statements were made or the events transpired. This evidence must be considered by you solely in this regard.

Substantive evidence of conditions at the facility was presented by plaintiff through other evidence — witnesses who testified first hand as to what they observed at the plant or knew of their own knowledge and through official records of the facility that reflect actual events or conditions at the plant. You the jury must rely solely on that evidence and the evidence of the defendants that may rebut or contradict it, to resolve the issue before you of whether plutonium escaped from the facility by reason of the negligence of defendant Kerr-McGee Nuclear Corporation, and thereby injured Silkwood.

The evidence of Silkwood's statements and allegations is before you solely for your consideration regarding Nuclear Corporation's affirmative defense in this case. Both defendants contend that Silkwood intentionally removed plutonium from the Cimarron facility to contaminate urine samples she voided at home. As indicated elsewhere in these instructions, the burden is on the defendants to prove this fact by a preponderance of the evidence. The above-mentioned evidence may be considered by you in your determination of Silkwood's state of mind, motivation or intention to aid you in deciding whether or not Silkwood intentionally removed plutonium from the facility. In this regard, it is not material whether Silkwood's statements, allegations and beliefs were, in fact, true or false. What Silkwood believed and felt was true, however, is material in your determination of her motivation and intentions that might lead to certain conduct. This evidence is admitted solely for your consideration of Silkwood's state of mind or intentions, to aid you in determining whether it is likelier than not that Silkwood intentionally removed plutonium from the facility.

INSTRUCTION NO. 14

The Court has admitted certain evidence in this case to show motivation, the intent or the credibility of various parties. Among these is plaintiff's Exhibit 307 — a list of questions submitted by Kerr-McGee Nuclear Corporation to its Cimarron facility employees on or about late December, 1974, and early January, 1975. This exhibit has been admitted for the sole purpose of showing Kerr-McGee Nuclear Corporation's state of mind as to its employees, their association with the Oil, Chemical and Atomic Workers Union, and problems arising out of its plant operations prior to that time, and particularly in the last half of the year 1974. You are to consider this exhibit for no other purpose.

[APPENDIX]

INSTRUCTION NO. 14a

The Court reminds you that plaintiff's Exhibits 87, 93, 97, 99 and 114 were admitted, even though they constitute hearsay, as providing background information pertinent to the Oil, Chemical and Atomic Workers Union's activities and interest in the Cimarron facility, and they are not to be considered as evidence of the truth of the matters set forth in the exhibits.

INSTRUCTION NO. 15

The plaintiff in this action was permitted to demonstrate in his case in chief evidence of incidents at the Cimarron facility occurring prior to the death of Karen Silkwood that might show or tend to show the alleged careless or negligent behavior on the part of the defendants or their employees in operation of the plant. You, the jury, are instructed that this evidence was admitted for the purpose of determining Kerr-McGee Nuclear Corporation's knowledge of, and attitude toward, any alleged defective, unsafe or hazardous working conditions in the plant. You may consider such incidents and such knowledge, if any, in your determination of whether to award plaintiff punitive damages against the defendants, as elsewhere instructed. This evidence was also admitted to aid you in deciding whether it is more likely than not that negligent conduct of either defendant caused the escape of plutonium from the Cimarron facility and thereby caused, or contributed to cause, Karen Silkwood's injuries, if any.

Evidence of incidents in the plant occurring after Silkwood's death was also admitted which might show or tend to show alleged careless or negligent conduct on the part of the defendants or their employees in plant operation. You are instructed that this evidence was admitted solely for the limited purpose of establishing whether a course of conduct existed on the part of the defendants, prior to Silkwood's death and continuing for some time thereafter, from

which an inference might be drawn that conditions existed at the Cimarron facility in November, 1974, that might cause or contribute to cause the escape of plutonium that caused Silkwood's injuries, if any. As with any testimony in this case, you may find it either believable or not, or give it whatever weight you desire. It was admitted solely to aid you in your determination of whether either defendant is liable for injuries to Karen Silkwood, if any, as instructed above.

Such evidence of incidents occurring after the contamination of Silkwood must not be considered by you in assessing the nature and extent of any conduct of Kerr-McGee for which you might determine punitive damages to be awardable in this case.

INSTRUCTION NO. 16

You are instructed that Kerr-McGee Corporation is liable for the damage to the person and property of Karen Silkwood resulting from the activities of the Kerr-McGee Nuclear Corporation at the Cimarron Plutonium Plant if you find that Kerr-McGee Corporation so dominated the management, policies, and finances of the Kerr-McGee Nuclear Corporation so that that corporation had no actual will or existence of its own but was only a mere instrumentality of Kerr-McGee Corporation.

In considering the relationship between Kerr-McGee Corporation and Kerr-McGee Nuclear Corporation, you should consider the evidence presented to you in the light of the following factors:

1. The ownership of stock of Kerr-McGee Nuclear Corporation by Kerr-McGee Corporation.
2. The presence on both corporations of the same officers or directors, if any.
3. The financial support, if any, of the Kerr-McGee Nuclear Corporation's operations by Kerr-McGee Corporation.

4. The underwriting of the incorporation and purchase of the capital stock of Kerr-McGee Nuclear Corporation by the parent corporation, Kerr-McGee Corporation.
5. The joint accounting and payroll system, if any.
6. The substantial business contacts and assets, if any, given by the parent corporation to the subsidiary.
7. The control of the nuclear corporation, if any, by the parent corporation.
8. The method of handling the financial statements of the subsidiary in relation to the parent, showing that the subsidiary was treated as a mere part of the parent corporation.
9. Whether Kerr-McGee Nuclear Corporation subsidiary was organized with a grossly inadequate capital structure.
10. Whether the property of the Nuclear Corporation subsidiary is used by the parent, Kerr-McGee Corporation, as its own.
11. Whether the individuals who exercise operating control over the Kerr-McGee Nuclear Corporation subsidiary exercise it in the interest of the parent, Kerr-McGee Corporation.
12. Whether there was a failure to observe the formal requirements attributable to the operations of a subsidiary.

These and other factors may be considered by you in arriving at your conclusion as to whether Kerr-McGee Nuclear Corporation was an independent corporation on the one hand or a mere instrumentality or alter ego of the parent corporation on the other. If you find that the Nuclear Corporation was a mere controlled extension or instrumentality of the parent Kerr-McGee Corporation, then if Nuclear Corporation is liable for any damages in this case, both corporations become equally liable.

If, however, you find that the plaintiff has not proved the above, then you must so indicate on the verdict form. This results in a verdict in favor of Kerr-McGee Corporation, regardless of your decision as to plaintiff's case against Kerr-McGee Nuclear Corporation.

INSTRUCTION NO. 17

At the beginning of this case both the Court and counsel for both parties told you that plaintiff was asking for $1,500,000 actual damages, and the amount of $10,000,000 exemplary or punitive damages, for the injuries alleged to have been inflicted upon Karen Silkwood by defendants. You were questioned by the Court and counsel on your reaction to such amounts of the prayer.

During the course of this trial plaintiff has asked the Court to allow him to amend his complaint to permit plaintiff to recover a larger amount, namely $70,000,000 total, for exemplary or punitive damages.

Federal rules require the Court to liberally allow such dollar amount amendments. Such requests for damages largely reflect the parties' or the lawyers' desires or opinions on what they want to recover. The Court has withheld any action upon plaintiff's last request because the federal rules also provide that the jury is not bound in any way by the plaintiff's request and may, under the evidence, allow a lesser or greater amount than any request or prayer for damages that a plaintiff may have made. In final essence, amounts of damages must be determined upon the jury's fair and impartial assessment of the evidence in their individual and collective judgments.

INSTRUCTION NO. 18

You are instructed that if you find, under the instructions previously given, that either or both defendants are liable to the estate of Karen Silkwood for any injuries and/or property damage suffered by her prior to her death, then it is your duty to award actual damages.

You are instructed that if you find from a preponderance of the evidence that prior to her death Karen Silkwood suffered any mental pain or anguish by reason of any physical injury suffered, then plaintiff is entitled to recover for the benefit of her estate such sum as you, after a full and fair consideration of all the evidence in this case, shall deem to be a reasonable and fair compensation for such mental anguish and physical pain suffered by Karen Silkwood by reason of her injuries. To award damages for mental anguish and emotional suffering, you must first find by a preponderance of the evidence that Karen Silkwood sustained physical injury from her exposure to plutonium on November 5, 6 and 7, 1974, and that any mental anguish and emotional suffering was proximately caused by such physical injury.

Your verdict for actual damages must include $5,000.00 as the value stipulated by the parties to compensate for property owned by Silkwood on November 7, 1974, and removed from her apartment because of contamination.

Your are further instructed that damages to Silkwood, if any, are limited to those which began on November 5, 1974, and ceased with her death. You are not to consider her death in awarding damages in this action. No damages may be awarded for any injury or physical or mental conditions, if any, which existed prior to November 5, 1974. Nor may you award damages for injuries, if any, that Silkwood would have sustained had she lived beyond November 13, 1974.

In arriving at the amount of your verdict you should consider plaintiff's age, condition of health before and after, and the nature, extent and duration of her injuries. For such items as pain, suffering and mental anguish there is no unit value and no mathematical formula the Court can give you. In this regard you are instructed that no witness is required to testify as to the amount of damages resulting from physical or mental and emotional pain and suf-

fering. Such proof is not required in a court of law. Instead, you, as jurors, are entitled to use your own judgment in arriving at a sum which will fairly and adequately compensate for such pain and anguish. The amount to be awarded rests within your sound discretion.

COURT'S NOTE:

During the deliberations of the jury the Court received the following written communication from the jury relative to the meaning of phraseology in an instruction — specifically No. 18. The Court replied with the following supplemental instruction, which is given the designation of Instruction No. 18(a).

INSTRUCTION NO. 18(a)

The Court has received the following written communication from the jury:

> "In Instruction # 18, what does physical injury mean?"

In answer to your question, you are invited to review and consider the total evidence in this regard.

Certainly physical injury can include a non-visible or non-detectable injury, and may include injury to bone, tissue, or cells. If a person has suffered physical injury under (on the basis of) expert medical opinion, it is only necessary that a person believe he or she has been physically injured as a basis for mental pain and suffering to occur. It has been admitted in this case by both parties and their expert medical witnesses that radiation had occurred to Ms. Silkwood from plutonium through the impact of alpha particles in her body. The witnesses, however, disagreed on whether or when physical injury occurred and, if so, its nature and extent.

The individual recollection of each juror, and your collective recollection, is invited to a mental review of this

evidence. The evidence is too comprehensive, from too many witnesses, and is scattered through the many weeks' record in this case. It would be impossible for the reporter to ascertain or read from the record all the evidence on this issue which he would be required to do if this were possible at this time.

INSTRUCTION NO. 19

If you find for the plaintiff for actual damages to Karen Silkwood, you must then consider whether to award exemplary or punitive damages to the plaintiff. In any action like the one before you, the jury may give damages for the sake of example and by way of punishment, if the jury finds the defendant or defendants have been guilty of oppression, fraud, or malice, actual or presumed. These damages are called in legal parlance exemplary or punitive damages.

The basis for allowance of punitive damages rests upon the principle that they are allowed as a punishment to the offender for the general benefit of society, both as a restraint upon the transgressor and as a warning and example to deter the commission of like offenses in the future.

Exemplary damages are not limited to cases where there is direct evidence of fraud, malice or gross negligence. They may be allowed when there is evidence of such recklessness and wanton disregard of another's rights that malice and evil intent will be inferred. If a defendant is grossly and wantonly reckless in exposing others to dangers, the law holds him to have intended the natural consequences of his acts, and treats him as guilty of a wilful wrong.

To constitute wilful or wanton negligence sufficient to justify an award of punitive damages, it is not necessary that there exist ill will toward the person injured, or specific intent to inflict the injury. If an act that caused harm

to plaintiff's decedent was the result of, or accompanied with, such gross negligence or reckless disregard of another's rights, manifesting an indifference to the consequences of the act, so that malice may be inferred, then an award of exemplary damages is appropriate.

If you find that the conduct of defendant Kerr-McGee Nuclear Corporation, if any, that caused or contributed to cause, Silkwood's alleged injuries, fits within this definition, you may award exemplary damages against that defendant. Any exemplary damages that you award must bear some relationship to the injuries inflicted, but need not bear any relation to the amount of actual damages awarded.

You may consider the financial worth of the defendant against whom such damages are awarded in determining the size of such an award that is proper under the facts of this case. That is, you may consider the wealth of defendant Kerr-McGee Nuclear Corporation in determining what amount of exemplary damages, if you find them appropriate, is consistent with the general purpose of such an award in deterring the defendant, and others like it, from committing similar acts in the future, and for punishment of the defendant for such acts.

If you have found by a preponderance of the evidence that Kerr-McGee Nuclear Corporation is the mere alter ego of Kerr-McGee Corporation, as elsewhere instructed, then you may consider the combined wealth of both corporations in determining the appropriate size of any such award.

INSTRUCTION NO. 20

In the verdict form, the Court will submit to you several interrogatories or questions. You are to return to court with your answers to these questions, instead of with a general verdict where you, the jury, would simply decide

either for the plaintiff or the defendants. Thereafter, and upon the basis of your answers, the Court will enter a judgment for the appropriate party.

These questions represent to you the individual issues presented in this case. They are listed in the order and the manner in which you must address them. The issues before you, as represented by these questions, and the law that controls them, are explained in these instructions.

The first question you must decide represents the affirmative defense of the Kerr-McGee defendants. You must determine whether the defendants have proved by a preponderance of the evidence that Karen Silkwood intentionally removed from work to her apartment the plutonium that caused her contamination on November 5th, 6th and 7th, 1974, for which this lawsuit is brought. The defendants have the burden of proof on this issue. "Preponderance of the evidence" is explained in one of the foregoing instructions, but it essentially means that something is more likely true than not true.

Thus if you believe that the evidence has established that it is more likely true than not that Karen Silkwood intentionally removed plutonium from the Cimarron facility, you must answer this question "yes." If, however, you find the weight or value of the evidence is to the contrary, or does not convince you either way, so that you cannot affirmatively find that her intentional removal of plutonium is any more likely than not, then you must answer "no" to this question.

A finding that Karen Silkwood intentionally removed plutonium from the facility results in a verdict for both defendants, and you must not answer any further questions. Thus, if you answer the first question "yes," you should so indicate on the verdict form and return it to the Court. You must not continue to answer further questions. A finding to the contrary, or a "no" answer to the first question, requires that you continue to answer the remaining questions.

A "no" answer to the first question results in the imposition of liability of Kerr-McGee Nuclear Corporation because of the legal doctrine of strict liability that controls this case. If you cannot find that Silkwood intentionally carried from work to her apartment the plutonium that caused her contamination, it is unnecessary for you to decide how plutonium escaped from the plant, how it entered her apartment, or how it caused her contamination, since it is a stipulated fact that the plutonium in Silkwood's apartment was from a defendant's plant.

The second question represents plaintiff's alternative theory for liability. It requires you to decide whether any negligence on the part of defendant Kerr-McGee Nuclear Corporation in the operation of the Cimarron facility caused or allowed the escape from that facility of the plutonium that contaminated Silkwood. Instructions on negligence have been presented in the body of these instructions. The Burden of proof on this issue, as stated elsewhere, is on the plaintiff.

The third question asks you to decide the amount of actual damages suffered by plaintiff's decedent, Karen Silkwood. An instruction defining what you should consider in reaching this determination is found in the foregoing instructions. This figure must include the amount of $5,000.00 for damages to property caused by plutonium contamination that has been stipulated by the parties. Any additional amount must reflect your dollar valuation of actual injuries to Silkwood's person, and any suffering and anguish caused thereby. The burden of proof on the nature and extent of damage remains on the plaintiff.

The fourth question requires that you decide whether defendant Kerr-McGee Nuclear Corporation is the mere instrumentality of its parent corporation, defendant Kerr-McGee Corporation. The factors that you must consider are listed in a prior instruction. The burden of proof on this issue is on the plaintiff.

The fifth and last question permits you to award exemplary damages against the defendant or defendants and in favor of the plaintiff. The nature and purpose of exemplary damages are explained in a separate instruction. Whether an award of exemplary damages is appropriate, and if so, what amount that award should be, is a matter for you to decide in light of the law given you in that instruction and all the evidence before you. The plaintiff has the burden of proof on this issue.

As you have learned in that instruction, you may consider the financial worth of the defendants as one factor in determining the amount of any such award. However, if you have answered "no" to question four above — if you find that the Nuclear Corporation subsidiary is not the instrumentality of its parent, Kerr-McGee Corporation — then you may only consider the financial worth of defendant Kerr-McGee Nuclear Corporation, and not the two corporations combined, in determining the amount that is appropriate. If your answer to question four is "yes," you may consider the combined worth of both defendants in determining the amount of such an award.

INSTRUCTION NO. 21

You are instructed that a corporation is entitled to the same fair and unprejudiced treatment and consideration as an individual under like circumstances. A corporation can act only through its officers and employees, and the conduct of an officer or employee of a corporation is the conduct of the corporation.

INSTRUCTION NO. 22

There are, generally speaking, two types of evidence from which a jury may properly find the truth as to the facts of a case. One is direct evidence — such as the testimony of an eye witness. The other is indirect or circumstantial evidence — the proof of a chain of circumstances pointing to the existence or non-existence of certain facts.

As a general rule, the law makes no distinction between direct and circumstantial evidence, but simply requires that the jury find the facts in accordance with the preponderance of all the evidence in the case, both direct and circumstantial.

INSTRUCTION NO. 23

Certain testimony has been given in this case by experts — that is, by persons who are specially qualified by experience or training and possess knowledge on matters not common to mankind in general. The law permits such persons to give their opinions regarding such matters. The testimony of experts is to be considered like any other testimony and is to be tried by the same tests, and should receive such weight and credit as the jury deems it entitled to, when viewed in connection with all the other facts and circumstances, and its weight and value are questions for the jury.

INSTRUCTION NO. 24

During the trial of a case certain testimony may be read to you by way of deposition. The testimony of a witness who for some reason cannot be present to testify from the witness stand is usually presented in writing under oath in the form of a deposition. Such testimony is entitled to the same consideration and, insofar as possible, is to be judged as to credibility and weighed by the jury in the same way as if the witness had been present.

Sometimes, as in this case, a deposition may be used in the sense of showing a prior statement is purportedly inconsistent with in-court testimony of the witness. The jury may take it as a fact that the deposition testimony admitted by the Court accurately reflects what the witness said at the time the deposition was taken.

[APPENDIX]

INSTRUCTION NO. 27

At some risk of over-explaining these instructions, but with the intent of the Court to place some of the evidence in this case in perspective in relation to the issues of the case, the Court gives you this instruction, which is somewhat in the nature of a legal commentary on the total scope of the instructions in the jury's use of them as legal guides in their deliberations.

You will recall that the evidence in the case began with evidence on behalf of the plaintiff that the chemical substance or element of plutonium was one of the most toxic and dangerous substances ever to confront man, and that it was a man-made element. This evidence was admitted to show the ultra-hazardous or extremely dangerous nature of the substance and the operation of a plant in either the fabrication of nuclear materials or for use as a source of energy, and to ultimately indicate a sound basis required by the public interest for the application of the legal doctrine of strict liability, one of the plaintiff's claimed legal bases of recovery on the one hand, or the duty or obligation of individual persons or corporations engaged in the nuclear industry to use the highest or utmost degree of care in running their plants under the plaintiff's second theory of liability — which is negligence.

It follows then, that the danger of the substance and in its fabrication or use, and the indication of the highest degree of care by the handler of the substance, sets the parameters of a handler's conduct in the running of its plant which may open the door wider to imposition of exemplary or punitive damages. To keep other handlers within the high care limitations and thus deter any repeated or future occurrence of such conduct showing a lesser degree of care, you may want to consider circumstances between judging individual and corporate conduct. While your legal duty is to use the same standards of judgment of conduct on both an individual and a corpo-

ration which, as has been explained to you, is an artificial legal person, your common sense may allow you to find that the individual is guided by his own action, conscience and thoughts, while a corporation is a group of persons, small or large, associated together to accomplish the corporate purpose whose actions or conduct can only be judged by how management and employees do their job, whose collective conscience or mental attitude may be illusive, and certainly different than religious, moral, philosophic, and knowledgeable currents that exist in a human mind and determine conscious human activity or good conscience.

Punitive damages in the last analysis, involve the element of bad thought, lax conscience, or "don't care" attitude, as more fully explained in the exemplary damage instruction. Government regulations of a governmental agency on conduct in a given field, are to keep something in social bounds as determined by the people who constitute government at legislative or executive levels. As indicated in other instructions, these regulations are based on the government's views of the best scientific and technical knowledge available at the time of their issuance or promulgation. Thus, in a democracy such as ours where the government responds to citizens' desires through the elective process, such regulations therefore can be deemed to reflect a broad base of citizen approval and as such are entitled to a high degree of respect and belief. On the other hand, you as jurors, and as fact finders in a trial in our judicial system, have the duty of finding truth under the evidence. In this context, and as explained in previous instructions, such regulations do not have to be accepted by you as right or accurate if they defy human credence, are questionable under best scientific knowledge, or can be shown not to accomplish their intended purpose.

In this case one of the defendants' defenses is "substantial compliance" with the regulations regulating the nuclear industry and the Kerr-McGee nuclear plant in particular. Compliance itself is a broad term implying two

things: one, that the conduct of the one complying was in complete accord with the standards of the regulations; and two, that there was adequate inspection and enforcement by the agency supervising the regulation to accurately determine the complier's conduct would amount to or constitute compliance. The defendants are not themselves claiming full compliance in this case.

The phrase, or the words "substantial compliance" therefore, is something less than compliance, and perhaps is confused by flexibility in meaning of the word "substantial," but still suggests in the light of common sense that most or a very large amount of the requirements dictated by the regulations had been done. Thus, corporate conduct of compliance with these regulations is entitled to the strongest and probably conclusive consideration by a jury as negativing or proving lack of bad conduct necessary to base punitive damages, unless the total evidence convinced the jury either that the regulations were not sound or true when measured by the weight of the scientific knowledge, or that the conduct was actually in violation of the regulations, or that the enforcement agency did not actually enforce, or that the person against whom a particular regulation was to apply knew or should have known that it would not accomplish its intended purpose. On the other hand, "substantial compliance" being less than compliance itself, would indicate that strong consideration be given by you that a complier's conduct was not in the punitive category unless you find one or more of the above limiting factors to be applicable. You may also consider in determining substantial compliance what conduct in a dangerous instrumentality such as the Kerr-McGee nuclear plant was not covered by regulations and which you determine would violate a reasonable man's standard of due care as should be applied in such circumstances.

Neither side of this case has advised the Court nor introduced evidence before the jury identifying or pointing out all the specific regulations relied on as relevant to con-

tentions of either compliance or noncompliance, or as to further explain the phrase "substantial compliance."

The total regulations of the Atomic Energy Commission (AEC), which was the regulatory body at the time of the events of the Silkwood contamination and prior thereto, are too numerous for production for this jury, although the content of certain regulations has been introduced in evidence or been testified about before the jury. Also, the voluminous license of the Kerr-McGee nuclear plant has been introduced in evidence before the jury. Likewise, many AEC regulation and license conditions are outside the scope of contentions in this trial, and compliance with them would not be any kind of shield against finding of any degree of negligent conduct. Those in the health and safety areas are the regulations to be focused upon by the jury in the light of the evidence and the statements of counsel.

The testimony and statements of counsel agree that the regulations of nuclear plant regulation have changed little between November 9, 1974, and the time frame of this trial. It is therefore most important that the jury always remember that in judging health and safety standards in the regulations that they are bound by what was known in scientific circles of the world and this country in 1974 and prior thereto, and not upon changes in scientific opinion that occurred after 1974.

INSTRUCTION NO. 28

On numerous occasions during the course of this trial the Court has admonished you to refrain from reading or listening to any of the many media accounts focusing on the national debate on the relative wisdom and safety of nuclear development. During selection of the jury for this case, the Court asked each of you whether you had any preconceived ideas or feelings on the subject of nuclear energy. On the basis of your answers, and in reliance on your sworn oath to abide by the Court's admonitions, this Court and the parties before you have faith that you can

decide the instant questions fairly, and without bias or influence from any public information, commentary, or opinion on this case or on issues not presented by it.

The issues in this case have been explained to you in these instructions. The sole evidence upon which you must rely in resolving them has been presented to you in this courtroom. In reaching your determinations, you are not to take into consideration any aspect of the public debate on the controversy over nuclear power. Your resolution of this case must solely relate to events and circumstances that occurred in the Cimarron facility that relate to the injuries to Karen Silkwood, if any, in light of the dangerousness of that facility activity. You must not intend the consequences of your verdict to reach beyond these facts, nor to play any role in the resolution of the public inquiry into the wisdom of nuclear development.

Your consideration of whether to award punitive damages in this case, if your findings bring you to that issue, may include the decision on what amount of award would be appropriate to deter these defendants, and others like them, from engaging in acts similar to those you have found in this case to be blameworthy, if any, according to these instructions. In this sense, your verdict may, if you find it appropriate, include damages intended as an example to others not before you, wherever they be, in connection with conduct like that evidenced in this case.

In final essence, your verdict must not be based upon any intention to encourage or discourage conduct not within the parameters of this case.

INSTRUCTION NO. 29

The Court has made certain rulings in the conduct of the trial, and particularly with reference to the admission of evidence. In so doing, the Court has not expressed or intimated in any way the weight or credit to be given any evidence or testimony admitted during the trial, nor indi-

cated in any way the conclusions to be reached by you in this case.

In this Court, it is entirely proper for the Judge, if he so desires, to comment on the evidence and express an opinion thereon to the jury. I am not going to do that in this case. I feel that this jury is fully capable of deciding the true facts in this case and applying the applicable rules of law to those true facts. If there is anything that I have said or done that might seem to indicate to you how I would decide this case, I instruct you to disregard the same and use your own judgment in arriving at your verdict in this case.

Also, I instruct you that while it is the duty and right of counsel to address you and to explain the testimony to enable you better to understand the questions which you are to decide, yet if counsel inadvertently mistake the law or mistake the evidence, you will follow the law as given to you by the Court in these instructions and not as stated by counsel, and you will take the evidence detailed by the witnesses and shown by the documents introduced instead of the statements of counsel.

In this connection, while I am on the subject of lawyers, you should use particular care not to mix your individual thought or reaction to the personality or trial tactics of the lawyers on either side with the merits of the lawsuit based on the issues of law and the evidence presented here in court.

You are the judges of the facts, the weight of the evidence, and the credibility of the witnesses. In determining such weight or credit, you may consider the interest, if any, which a witness may have in the result of the trial, the relation of the witness to the parties, the bias or prejudice, if any has been apparent, the candor, fairness, intelligence and demeanor of the witness, the ability of the witness to remember and relate past occurrences, and means of observation and his opportunity of knowing the

matters about which the witness has testified. If you find that any witness has willfully testified falsely concerning any material matter, you have a right to distrust the testimony of that witness in other matters, and you may reject all or part of the testimony of that witness, or you may give it such weight or credibility as you think it deserves.

From all the facts and circumstances appearing in evidence and coming to your observation during the trial, and aided by the knowledge which you each possess in common with other persons, you will reach your conclusions. You should not let sympathy, sentiment or prejudice enter into your deliberations, but you should discharge your duties as jurors in an impartial, conscientious and faithful manner under your oaths and return such verdict as the evidence warrants when measured by these instructions. These instructions contain all the law, whether statutory or otherwise, which may be applied by you in this case and the rules by which you should weigh the evidence and determine the facts in issue. You must consider the instructions as a whole and not a part to the exclusion of the rest. You will not use any method of chance in arriving at a verdict, but base it on the judgment of each juror concurring therein.

Upon retiring to the jury room, you will select one of your number to act as foreperson. Thereafter, such person will preside over your deliberations and be your spokesperson in court.

A verdict form has been prepared for your use in this case in accordance with your duty under these instructions. I think the proper use of this form in reporting your verdict will be obvious to you; but should you desire any further help in deciding how to use the form, please advise the Court through your baliff.

If it becomes necessary during your deliberations to communicate with the Court, you may send a note by the bailiff. But bear in mind that you are not to reveal to the

Court or any person how the jury stands, numerically or otherwise, on this matter.

* * * *

The bailiff will come forward to be sworn.

VERDICT

We, the jury in the above entitled case, duly impaneled and sworn upon our oaths, answer the questions submitted to us as follows:

1. Do you find by a preponderance of the evidence that Karen Silkwood intentionally — that is, knowingly and consciously — carried from work to her apartment the plutonium that caused her contamination?

Yes ☐ No ☐

[If your answer to Question No. 1 is "Yes," do not answer any further questions and return to report this to the Court. If your answer is "No," then you must answer the remaining questions.]

2. Do you find by a preponderance of the evidence that Kerr-McGee Nuclear Corporation was negligent in its operation of the Cimarron facility so as to allow the escape of the plutonium from the facility and proximately cause the contamination of Karen Silkwood?

Yes ☐ No ☐

[If you have answered Question No. 2, then you must continue on to Question No. 3.]

3. Enter the amount of actual damages, as defined in the Court's instructions, that you find Karen Silkwood suffered.

$_____.

[If you have answered Question No. 3, then you must continue on to Question No. 4.]

4. Do you find by a preponderance of the evidence that Kerr-McGee Nuclear Corporation is the mere instrumentality of the parent corporation, Kerr-McGee Corporation?

Yes ☐ No ☐

[If you have answered Question No. 4, then you must continue on to Question No. 5.]

5. If you find that an award of exemplary damages is appropriate, as defined in the Court's instructions, enter the amount of exemplary damages that you award plaintiff.

$.....

[Question No. 5 is the last question for you, the jury, to consider. After completing those questions which the form indicates are appropriate in light of your findings, you should return this verdict form to the Court.]

.....

Foreman

.....

Date

UNITED STATES COURT OF APPEALS
TENTH CIRCUIT

BILL M. SILKWOOD, Administrator of the Esate of Karen G. Silkwood, Deceased, Plaintiff-Appellee,	)	
v.	)	
	)	No. 79-1894
THE KERR-McGEE CORPORATION, a Delaware corporation, and KERR-McGEE NUCLEAR CORPORATION, a Delaware corporation, Defendants-Appellants.	)	

NOTICE OF APPEAL TO THE SUPREME COURT OF THE UNITED STATES

Notice is hereby given that Bill M. Silkwood, Plaintiff-Appellee, hereby appeals to the Supreme Court of the United States from the final order denying rehearing in this action entered on February 19, 1982.

This appeal is taken pursuant to Title 28, United States Code, Section 1254(2).

Dated:

(s) *Arthur R. Angel*
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Oklahoma City, OK 73102

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[Certificate of Service omitted in this printing]

ADDENDUM A

H.Rep. 296, 85th Cong, 1st Sess (1957):

"The basic principles underlying the bill are two:

1. Since the rights of third parties who are injured are established by State law, there is no interference with the State law until there is a likelihood that the damages exceed the amount of financial responsibility required together with the amount of the indemnity. At that point the Federal interference is limited to the prohibition of making payments through the State courts and to prorating the proceeds available.

2. A system of indemnification is established rather than an insurance system" . . . at p. 9.

S.Rep.No.1605, 89th Cong, 2nd Sess. *Reprinted in* 1966 U.S. Code, Cong. & Adm. News 3201 (1966) and H.Rep. No. 2043, 89th Cong, 2nd Sess (1966):

"Since its enactment by Congress in 1957, one of the cardinal attributes of the Price-Anderson Act has been its minimal interference with State law. Under the Price-Anderson system, the claimant's right to recover from the fund established by the Act is left to the tort law of the various states; the only interference with State law is a potential one, in that the limitation of liability feature of the Act would come into play in the exceedingly remote contingency of a nuclear incident giving rise to damages in excess of the amount of financial responsibility required together with the amount of the governmental indemnity." H.Rep. at p.6, S.Rep. at p.3201.

"Opponents of such a Federal [Nuclear tort] statute argue that it is unnecessary and inappropriate for the Federal Government to legislate in areas which the States are equipped to handle, particularly regarding

those matters which have been within their traditional jurisdiction. This seems especially so, they contend, when nothing has so far indicated that the substantive rules of existing American law will not provide adequate protection if a nuclear incident should occur." H.Rep. at p.7-8, S.Rep. at 3207.

"This [waiver of defenses] approach to the problems discussed above is in keeping with the approach followed in enacting the original Price-Anderson Act—namely, interfering with State law to the minimum extent necessary. In essence, the plan adopted permits retention of State law with respect to the cause of action and measure of damages, but the requirements specified for the insurance contracts and indemnity agreements provide the uniform rules needed to accomplish the bill's objectives. This approach, moreover, cements the new system firmly to the Price-Anderson Act without extending the new concepts to activities not covered by the Act. The objective of the committee in drafting this bill has been to perfect the Price-Anderson law, this is not a measure designed either to accomplish a general revision of American tort law or set precedents for activities in other fields." H.Rep. at p.9, S.Rep. at 3209.

"Furthermore, enactment of a Federal tort would require consideration of such matters as proof of damages and causation, and the possibility of continued validity of some portions of State law. This bill, on the other hand, seeks to isolate and deal effectively with certain problem areas in existing State and Federal law, leaving undisturbed the body of the law."

at p.10.

"at the same time, however, the bill has been drafted so that minor claims involving nuclear facilities or materials may remain subject to the traditional rules of tort law." H.Rep. at p.11, S.Rep. at 3211.

"Accordingly, in the absence of some extraordinary occurrence involving a nuclear facility or device or nuclear materials, traditional concepts should be allowed to prevail." H.Rep. at p.11, S.Rep. at 3211.

"Absent such a [ENO] determination, a claimant would have exactly the same rights that he has today under existing law—including, perhaps, benefit of a rule of strict liability if applicable State law so provides. Thus, this bill in no way provides for deprivation of a claimant's existing rights." H.Rep. at p.12, S.Rep. at 3212.

Congressional Record 23633 (Sept. 22, 1966):

Mr. Pasture.

"Moreover, it was important to note that S. 3830—while providing for the elimination of certain serious legal obstacles which might face claimants in the event of a substantial nuclear incident—does not establish a new body of Federal tort law. Instead, this bill follows the approach of the original Price-Anderson Act, that is, making a minimum interference with the laws of the several states insofar as legal liability for nuclear incidents is conceived. Our committee continues to endorse this general approach."

Congressional Record 24634 (Sept. 30, 1966):

Mr. Hosmer.

"The procedures under this bill for the settlement of claims on account of a nuclear accident come into play when the accident is of such type as the AEC determines to be an 'extraordinary nuclear occurrence'. Before that point there are still remedies, the usual ones, and the usual means of settling a claim. So whether or not there is an 'extraordinary nuclear occurrence' merely goes to the manner and procedures by which settlements are arrived at. It does not go to the substance of the rights of anyone."

Mr. Saylor.

"Does the gentleman from California mean to tell the House that if there is a nuclear incident there is another means of liability against the Federal Government, rather than as provided in the Price-Anderson bill?"

Mr. Hosmer.

"I am saying no such thing. I say merely that there might be a nuclear incident, and perhaps one person will be slightly injured and $20 worth of damage done to property. We would not call upon the procedures of this bill for settling that kind of situation. We would go about it in the ordinary manner of bringing a suit against somebody." at 24633.

Mr. Hosmer.

"This bill does not superimpose a new body of Federal law upon a segment of our traditional tort laws. Rather, it accomplishes the beneficial purposes we have in mind principally by providing for contractual agreement by the persons who might be held liable for a nuclear incident to forego certain defenses that might be available to them under applicable State or Federal law. The Atomic Energy Commission would also waive these defenses in its indemnity agreements. Through this mechanism the Price-Anderson Act will remain true to the principle that has been a cornerstone of the Act since its passage, viz. minimal interference with State law." at 24637.

H.Rep. 648, 94th Cong, 1st Sess (1975):

"The study by the Columbia University Legislative Drafting Research Fund examined the situation that would prevail if the Price-Anderson Act were to be allowed to expire. The study concluded that the resulting legal situation in the event of a [extraordinary] nuclear [occurrence] incident would be chaotic. In-

jured parties would be subject to whatever tort laws prevailed in the State in which the incident occurred or in which they suffered harm." at p.7.

ADDENDUM B

1. Silkwood did not intentionally remove plutonium from the plant. (Special Int. #1); she did not accidentally remove plutonium from the plant in her kits. (Kerr-MeGee stipulation)

2. Kerr-McGee was strongly anti-union: it broke a strike in 1973 using newly hired, untrained workers to perform extremely hazardous work in an effort to destroy the OCAW, tr. 3127, 3196-7, 7808, 7760, 6580, Px285, R.v. 13; Kerr-McGee instigated and strongly supported an attempt to decertify the OCAW as bargaining agent for the plant in the fall of 1974, tr. 7757-62, Px 182, R.v. 13; Kerr-McGee repeatedly blamed the union for its own deficiencies. tr. 7519-22, 7601-5.

3. Karen Silkwood was an active OCAW member and was the member of the three-person union negotiating team with responsibility for health and safety issues. tr. 7761-2.

4. In September, 1974, the three committee members traveled to Washington, D.C., met with OCAW national officials, and presented charges of numerous dangerous health and safety violations to AEC staff members. tr. 3123-5, 3148-53, Px63-A, R.v. 13. The AEC required documentation of the charges and Silkwood was assigned by OCAW officials the task of collecting documentations for the allegations. tr. 3136-7, 3217, 3239.

5. Silkwood also told the OCAW that there was evidence that x-rays of the fuel rods Kerr-McGee made at the plant were being falsified illegally, tr. 3123-25, 3312, and a plan was devised whereby the evidence of this would

be turned over to a reporter for the NEW YORK TIMES. tr. 3136. Silkwood was instructed by OCAW officials to maintain a low profile and do nothing which would call attention to her while she was gathering this information. tr. 3136-7, 3217, 3239.

6. Kerr-McGee management was aware of the trip to Washington and of the meeting with the AEC. tr. 1266, 3220, 8472, 6577-8, 8504-5, 3728.

7. To combat the decertification attempt OCAW brought in two plutonium experts to Oklahoma to present a seminar to plant employees. Silkwood actively participated in this attempt to demonstrate the deception being practiced by Kerr-McGee in concealing the risks of the jobs at the plant and engaged in a heated exchange with a fellow lab employee, Dwight Gary Longacre, a staunch union foe. Px130/1,/2,/3,/4, R.v. 13, tr. Vol. 15A and 16A.

8. On October 16, 1974, the union won the decertification election by a vote of 80-61. tr. 3219, 6269, 7761, 7487.

9. A few days after the union victory plutonium was added to a urine sample which had been turned in by Silkwood to the exclusive custody of the health physics office of Kerr-McGee. Dx156.

10. During this period of time Silkwood began collecting information and recording some of it in notebooks, Px120A, Px276, R.v. 13, tr. 3137, 3156, 3743, and relayed some of the information discovered to OCAW staffer Steve Wodka in a series of telephone conversations. Px131, R.v. 13, tr. 3138.

11. Kerr-McGee management discovered that Silkwood was collecting damaging information at the plant in mid-October, 1974. tr. 2291-2, 8510-11, 6954-5, 7678.

12. Subsequent to this discovery by Kerr-McGee and during the time Silkwood was assembling information both for the AEC investigation and the meeting with the NEW

YORK TIMES reporter, insoluble plutonium was again added to bicassay samples turned in by Silkwood to the exclusive custody and control of Kerr-McGee, Dx156, Dx37, R.v. 18.

13. In early November, 1974, arrangements were made to meet with David Burnham of the TIMES in Dallas, Texas. In response to repeated admonitions by Wodka that the charges of improprieties had to be documented, Silkwood assured Wodka that she had obtained such proof, tr. 3216-7; Wodka and his superior, Anthony Mazzochi, were confident that Silkwood was obtaining the necessary proof and that the union strategy of using these revelations in the press to strengthen the union position in upcoming contract negotiations was succeeding. tr. 3217, 3239, 3242-4.

14. Negotiations for a new collective bargaining contract were set for early November; Silkwood was a member of the union negotiating team. tr. 7761-2.

15. Silkwood left work on October 31 and did not return until November 5th. On her return to work she was given a written reprimand although she had not been contacted or interviewed prior to the time the reprimand was issued. Dx 37, Rv. 18, tr. 6368.

16. No source at the plant was located for either the November 5th or November 6th contaminations of Silkwood. See our Brief, p. 38 n.13. Silkwood's November 7th contamination was determined to be off-site. It was also discovered that 7 previously-collected sample kits had been spiked with insoluble plutonium which could not be naturally excreted. Dx 37, R.v. 18. The highest level of contamination in Silkwood's apartment was located on a package of food in the refrigerator. Dx37, R.v. 18.

17. All of the samples that were spiked were provided by Kerr-McGee and had been delivered into Kerr-McGee's exclusive custody and control. The one sample which had not yet been given to Kerr-McGee was located in Silkwood's locker and was not spiked. Dx37, R.v. 18.

18. The source of Silkwood's November 7th contamination was Pellet Lot 29—which had been shipped out of the plant in the prior summer. Silkwood did not have access to Lot 29, but Kerr-McGee management did since a sample of each lot was required to be kept in the vault. Px78-1, 78-2, R.v. 13.

19. Silkwood was immediately accused of having removed plutonium from the plant, tr. 3753-4, and arriving AEC inspectors were told by Kerr-McGee officials that Silkwood had taken plutonium. Kerr-McGee subsequently accused Silkwood of having intentionally contaminated herself—that she had deliberatly eaten plutonium in order to "embarass" the company. Px226, p. 3, tr. 8071-3.

20. The bioassay kits were immediately recognized as having been spiked with insoluble plutonium. Such an act by Silkwood would have placed her in the limelight in direct violation of instructions from OCAW headquarters and since her credibility was a paramount issue, tr. 3238, would have destroyed the union's bargaining position, its credibility, and hers. tr. 3238-40, 3330.

21. Silkwood knew that insoluble plutonium could not be naturally excreted, Add. 3, p. 4 to our Brief, and that plutonium could not be excreted at the levels contained in the kits. tr. 7707. Silkwood recognized the dangers of working with plutonium outside a controlled environment, tr. 7707, 3063, Add. 3, p.1 to our Brief. She was very health-conscious. tr. 9499.

22. The contamination of Silkwood's apartment would justify a search of her apartment to dig for the documents Kerr-McGee knew she was accumulating and would undermine her credibility with the AEC and the TIMES. tr. 3264-6, 3238-9. Silkwood's apartment was thoroughly searched and all of the contents were examined including some which, although not contaminated, were nevertheless seized. Dx37, R.v. 18.

23. As a result of her contamination Silkwood was denied further access to the plant, was placed in a punitive work assignment, and was accompanied by a guard whereever she went in the facility. tr. 7685-89, 7698-9, Px291, R.v. 13.

24. Silkwood was to meet with Wodka and Burnham in Oklahoma City on the night of November 13 to deliver the documentation she had assembled. tr. 3848-9, 3743. Early the evening of the 13th, Silkwood attended a OCAW strategy session where she displayed these documents to a fellow worker immediately before departing for the Wodka/Burnham meeting. tr. 3657, 3714-6.

25. Minutes after leaving the union strategy session Silkwood was killed in an automobile accident. That night Kerr-McGee officials searched the wrecked automobile. The documents which Silkwood had immediately before the accident were never found. See our offer of proof tr. 9935-41.

26. After Silkwood's death the other negotiating team members were harrassed and punished as were other union members, tr. 2229, 2302-6, 265401272-3, including the mandatory administration of a polygraph examination which focused on union matters.

27. After Silkwood's death the AEC confirmed many of the safety and health problems identified in the September 27th meeting in Washington, Dx38, R.v. 18, and a special ERDA review team confirmed that photomicrographs of test welds on the fuel rods had been touched up to obscure defects in the negatives in or near the critical weld areas. Dx99, R.v. 18, tr. 7557-61, 7658. In December, 1975, the plant was closed.

ARTICLE VI, Clause 2 of the United States Constitution:

This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; and all Treaties made, or which shall be made, under the Authority of the United States, shall be the supreme Law of the Land; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding.

FIFTH AMENDMENT to the United States Constitution:

No person shall be held to answer for a capital, or otherwise infamous crime, unless on a presentment or indictment of a Grand Jury, except in cases arising in the land or naval forces, or in the Militia, when in actual service in time of War or public danger; nor shall any person be subject for the same offence to be twice put in jeopardy of life or limb; nor shall be compelled in any criminal case to be a witness against himself, nor be deprived of life, liberty, or property, without due process of law; nor shall private property be taken for public use without just compensation.

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28 U.S.C. § 1254. *Courts of appeals; certiorari; appeal; certified questions.*

Cases in the courts of appeals may be reviewed by the Supreme Court by the following methods:

(1) By writ of certiorari granted upon the petition of any party to any civil or criminal case, before or after rendition of judgment or decree;

(2) By appeal by a party relying on a State statute held by a court of appeals to be invalid as repugnant to the Constitution, treaties or laws of the United States, but such appeal shall preclude review by writ of certiorari at the instance such appellant, and the review on appeal shall be restricted to the Federal question presented.

[APPENDIX]

28 U.S.C. § 1257. *State courts; appeal; certiorari*

Final judgments or decrees rendered by the highest court of a State in which a decision could be had, may be reviewed by the Supreme Court as follows:

(1) By appeal, where is drawn in question the validity of a treaty or statute of the United States and the decision is against its validity.

(2) By appeal, where is drawn in question the validity of a statute of any state on the ground of its being repugnant to the Constitution, treaties or laws of the United States, and the decision is in favor of its validity.

28 U.S.C. § 2103. *Appeal from State court or from a United States court of appeals improvidently taken regarded as petition for writ of certiorari*

If an appeal to the Supreme Court is improvidently taken from the decision of the highest court of a State, or of a United States court of appeals, in a case where the proper mode of a review is by petition for certiorari, this alone shall not be ground for dismissal; but the papers whereon the appeal was taken shall be regarded and acted on as a petition for writ of certiorari and as if duly presented to the Supreme Court at the time the appeal was taken. Where in such a case there appears to be no reasonable ground for granting a petition for writ of certiorari it shall be competent for the Supreme Court to adjudge to the respondent reasonable damages for his delay, and single or double costs.

42 U.S.C. § 2011. *Congressional declaration of policy*

Atomic energy is capable of application for peaceful as well as military purposes. It is therefore declared to be the policy of the United States that—

(a) the development, use, and control of atomic energy shall be directed so as to make the maximum contribution to the general welfare, subject at all times to

the paramount objective of making the maximum contribution to the common defense and security; and

(b) the development, use, and control of atomic energy shall be directed so as to promote world peace, improve the general welfare, increase the standard of living, and strengthen free competition in private enterprise.

42 U.S.C. § 2012. *Congressional findings*

The Congress of the United States makes the following findings concerning the development, use, and control of atomic energy:

(a) The development, utilization, and control of atomic energy for military and for all other purposes are vital to the common defense and security.

(b) Repealed. Pub.L. 88-489, § 1, Aug. 26, 1964, 78 Stat. 602.

(c) The processing and utilization of source, byproduct, and special nuclear material affect interstate and foreign commerce and must be regulated in the national interest.

(d) The processing and utilization of source, byproduct, and special nuclear material must be regulated in the national interest and in order to provide for the common defense and security and to protect the health and safety of the public.

(e) Source and special nuclear material, production facilities, and utilization facilities are affected with the public interest, and regulation by the United States of the production and utilization of atomic energy and of the facilities used in connection therewith is necessary in the national interest to assure the common defense and security and to protect the health and safety of the public.

(f) The necessity for protection against possible interstate damage occurring from the operation of facilities for

the production or utilization of source or special nuclear material places the operation of those facilities in interstate commerce for the purposes of this chapter.

(g) Funds of the United States may be provided for the development and use of atomic energy under conditions which will provide for the common defense and security and promote the general welfare.

* * * *

(i) In order to protect the public and to encourage the development of the atomic energy industry, in the interest of the general welfare and of the common defense and security, the United States may make funds available for a portion of the damages suffered by the public from nuclear incidents, and may limit the liability of those persons liable for such losses.

42 U.S.C. § 2013. *Purpose of chapter*

It is the purpose of this chapter to effectuate the policies set forth above by providing for—

(a) a program of conducting, assisting, and fostering research and development in order to encourage maximum scientific and industrial progress.

* * * *

(c) a program for Government control of the possession, use, and production of atomic energy and special nuclear material, whether owned by the Government or others, so directed as to make the maximum contribution to the common defense and security and the national welfare, and to provide continued assurance of the Government's ability to enter into and enforce agreements with nations or groups of nations for the control of special nuclear materials and atomic weapons;

(d) a program to encourage widespread participation in the development and utilization of atomic energy for peaceful purposes to the maximum extent consistent with

the common defense and security and with the health and safety of the public;

• • • •

(f) a program of administration which will be consistent with the foregoing policies and programs, with international arrangements, and with agreements for cooperation, which will enable the Congress to be currently informed so as to take further legislative action as may be appropriate.

42 U.S.C. § 2014. *Definitions*

The intent of Congress in the definitions as given in this section should be construed from the words or phrases used in the definitions. As used in this chapter:

• • • •

(c) The term "atomic energy" means all forms of energy released in the course of nuclear fission or nuclear transformation.

• • • •

(e) The term "byproduct material" means (1) any radioactive material (except special nuclear material) yielded in or made radioactive by exposure to the radiation incident to the process of producing or utilizing special nuclear material, and (2) the tailings or wastes produced by the extraction or concentration of uranium or thorium from any ore processed primarily for its source material content.

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(j) The term "extraordinary nuclear occurrence" means any event causing a discharge or dispersal of source, special nuclear, or byproduct material from its intended place of confinement in amounts offsite, or causing radiation levels offsite, which the Commission determines to be substantial, and which the Commission determines has resulted or will probably result in substantial damages to persons offsite or property offsite. Any determination by the Commission that such an event has, or has not, occurred shall be final

and conclusive, and no other official or any court shall have power or jurisdiction to review any such determination. The Commission shall establish criteria in writing setting forth the basis upon which such determination shall be made. As used in this subsection, "offsite" means away from "the location" or "the contract location" as defined in the applicable Commission indemnity agreement, entered into pursuant to section 2210 of this title.

(k) The term "financial protection" means the ability to respond in damages for public liability and to meet the costs of investigating and defending claims and settling suits for such damages.

* * * *

(p) The term "licensed activity" means an activity licensed pursuant to this chapter and covered by the provisions of section 2210(a) of this title.

(q) The term "nuclear incident" means any occurrence, including an extraordinary nuclear occurrence, within the United States causing, within or outside the United States, bodily injury, sickness, disease, or death, or loss of or damage to property, or loss of use of property, arising out of or resulting from the radioactive, toxic, explosive, or other hazardous properties of source, special nuclear, or byproduct material: *Provided, however,* That as the term is used in section 2210(*l*) of this title, it shall include any such occurrence outside the United States: *And provided further,* That as the term is used in section 2210(d) of this title, it shall include any such occurrence outside the United States if such occurrence involves source, special nuclear, or byproduct material owned by, and used by or under contract with, the United States: *And provided further,* That as the term is used in section 2210(c) of this title, it shall include any such occurrence outside both the United States and any other nation if such occurrence arises out of or results from the radioactive, toxic, explosive, or other hazardous properties of source, special nu-

clear, or byproduct material licensed pursuant to subchapters V, VI, VII, and IX of this chapter, which is used in connection with the operation of a licensed stationary production or utilization facility or which moves outside the territorial limits of the United States in transit from one person licensed by the Commission to another person licensed by the Commission.

* * * *

(t) The term "person indemnified" means (1) with respect to a nuclear incident occurring within the United States or outside the United States as the term is used in section 2210(c) of this title, and with respect to any nuclear incident in connection with the design, development, construction, operation, repair, maintenance, or use of the nuclear ship Savannah, the person with whom an indemnity agreement is executed or who is required to maintain financial protection, and any other person who may be liable for public liability or (2) with respect to any other nuclear incident occurring outside the United States, the person with whom an indemnity agreement is executed and any other person who may be liable for public liability by reason of his activities under any contract with the Commission or any project to which indemnification under the provisions of section 2210(d) of this title has been extended or under any subcontract, purchase order, or other agreement, of any tier, under any such contract or project.

* * * *

(w) The term "public liability" means any legal liability arising out of or resulting from a nuclear incident, except: (i) claims under State or Federal workmen's compensation acts of employees of persons indemnified who are employed at the site of and in connection with the activity where the nuclear incident occurs; (ii) claims arising out of an act of war; and (iii) whenever used in section 2210(a), (c), and (k) of this title, claims for loss of, or damage to, or loss of use of property which is located at the site of and used in connection with the licensed activity

where the nuclear incident occurs. "Public liability" also includes damage to property of persons indemnified: *Provided*, That such property is covered under the terms of the financial protection required, except property which is located at the site of and used in connection with the activity where the nuclear incident occurs.

* * * *

42 U.S.C. § 2021

State regulation of activities for certain purposes

(k) Nothing in this section shall be construed to affect the authority of any State or local agency to regulate activities for purposes other than protection against radiation hazards.

42 U.S.C. § 2210. *Indemnification and limitation of liability —Financial protection for public liability claims; indemnification agreement; waiver of immunity*

(a) Each license issued under section 2133 or 2134 of this title and each construction permit issued under section 2235 of this title shall, and each license issued under section 2073, 2093, or 2111 of this title may, for the public purposes cited in section 2012(i) of this title, have as a condition of the license a requirement that the licensee have and maintain financial protection of such type and in such amounts as the Commission in the exercise of its licensing and regulatory authority and responsibility shall require in accordance with subsection (b) of this section to cover public liability claims. Whenever such financial protection is required, it may be a further condition of the license that the licensee execute and maintain an indemnification agreement in accordance with subsection (c) of this section. The Commission may require, as a further condition of issuing a license, that an applicant waive any immunity from public liability conferred by Federal or State law.

* * * *

Indemnification from public liability in excess of level of financial protection; aggregate indemnity

(c) The Commission shall, with respect to licenses issued between August 30, 1954, and August 1, 1987, for which it requires financial protection of less than $560,000,000, agree to indemnify and hold harmless the licensee and other persons indemnified, as their interest may appear, from public liability arising from nuclear incidents which is in excess of the level of financial protection required of the licensee. The aggregate indemnity for all persons indemnified in connection with each nuclear incident shall not exceed $500,000,000 excluding costs of investigating and settling claims and defending suits for damage: *Provided, however,* That this amount of indemnity shall be reduced by the amount that the financial protection required shall exceed $60,000,000. Such a contract of indemnification shall cover public liability arising out of or in connection with the licensed activity. With respect to any production or utilization facility for which a construction permit is issued between August 30, 1954, and August 1, 1987, the requirements of this subsection shall apply to any license issued for such facility subsequent to August 1, 1987.

Indemnification agreements for construction or operation of production or utilization facilities, or other activities, applicability to contracts; sovereign immunity

(d) In addition to any authority the Commission may have, the Commission is authorized until August 1, 1987, to enter into agreements of indemnification with its contractors for the construction or operation of production or utilization facilities or other activities under contracts for the benefit of the United States involving activities under the risk of public liability for a substantial nuclear incident. In such agreements of indemnification the Commission may require its contractor to provide and maintain financial protection of such a type and in such amounts as the Commission shall determine to be appropriate to cover public liability arising out of or in connection with the contract-

ual activity, and shall indemnify the persons indemnified against such claims above the amount of the financial protection required, in the amount of $500,000,000, excluding costs of investigating and settling claims and defending suits for damage in the aggregate for all persons indemnified in connection with such contract and for each nuclear incident: *Provided,* That this amount of indemnity shall be reduced by the amount that the financial protection required shall exceed $60,000.00: *Provided further,* That in the case of nuclear incidents occurring outside the United States, the amount of the indemnity provided by the Commission shall not exceed $100,000,000. The provisions of this subsection may be applicable to lump sum as well as cost type contracts and to contracts and projects financed in whole or in part by the Commission. A contractor with whom an agreement of indemnification has been executed and who is engaged in activities connected with the underground detonation of a nuclear explosive device shall be liable, to the extent so indemnified under this section, for injuries or damage sustained as a result of such detonation in the same manner and to the same extent as would a private person acting as principal, and no immunity or defense founded in the Federal, State, or municipal character of the contractor or of the work to be performed under the contract shall be effective to bar such liability.

Aggregate liability for a single nuclear incident

(e) The aggregate liability for a single nuclear incident of persons indemnified, including the reasonable costs of investigating and settling claims and defending suits for damage, shall not exceed (1) the sum of $500,000,000 together with the amount of financial protection required of the licensee or contractor or (2) if the amount of financial protection required of the licensee exceeds $60,000,000, such aggregate liability shall not exceed the sum of $560,000,000 or the amount of financial protection required of the licensee, whichever amount is greater: *Provided,* That in the event of a nuclear incident involving damages in excess

of that amount of aggregate liability, the Congress will thoroughly review the particular incident and will take whatever action is deemed necessary and appropriate to protect the public from the consequences of a disaster of such magnitude: *And provided further*, That with respect to any nuclear incident occurring outside of the United States to which an agreement of indemnification entered into under the provisions of subsection (d) of this section is applicable, such aggregate liability shall not exceed the amount of $100,000,000 together with the amount of financial protection required of the contractor.

* * * *

Survey of causes and extent of damage; report to Joint Committee, Congressmen of affected districts and Senators of affected States; availability to public

(i) After any nuclear incident which will probably require payments by the United States under this section or which will probably result in public liability claims in excess of $560,000,000, the Commission shall make a survey of the causes and extent of damage which shall forthwith be reported to the Joint Committee, to the Congressmen of the affected districts, and to the Senators of the affected States, and, except for information which would cause serious damage to the national defense of the United States, all final findings shall be made available to the public, to the parties involved and to the courts. The Commission shall report to the Joint Committee by April 1, 1958, and every year thereafter on the operations under this section.

* * * *

Agreements for establishment of procedures for handling, investigation, and settlement of public liability claims; emergency assistance payments

(m) The Commission is authorized to enter into agreements with other indemnitors to establish coordinated procedures for the prompt handling, investigation, and settlement of claims for public liability. The Commission and

other indemnitors may make payments to, or for the aid of, claimants for the purpose of providing immediate assistance following a nuclear incident. Any funds appropriated to the Commission shall be available for such payments. Such payments may be made without securing releases, shall not constitute an admission of the liability of any person indemnified or of any indemnitor, and shall operate as a satisfaction to the extent thereof of any final settlement or judgment.

Waiver of defenses; jurisdiction and venue of public liability actions; removal or transfer of actions; process

(n)(1) With respect to any extraordinary nuclear occurrence to which an insurance policy or contract furnished as proof of financial protection or an indemnity agreement applies and which—

(a) arises out of or results from or occurs in the course of the construction, possession, or operation of a production or utilization facility, or

(b) arises out of or results from or occurs in the course of transportation of source material, byproduct material, or special nuclear material to or from a production or utilization facility, or

(c) during the course of the contract activity arises out of or results from the possession, operation, or use by a Commission contractor or subcontractor of a device utilizing special nuclear material or byproduct material,

the Commission may incorporate provisions in indemnity agreements with licensees and contractors under this section, and may require provisions to be incorporated in insurance policies or contracts furnished as proof of financial protection, which waive (i) any issue or defense as to conduct of the claimant or fault of persons indemnified, (ii) any issue or defense as to charitable or governmental immunity, and (iii) any issue or defense based on any statute of limitations if suit is instituted within three years from

the date on which the claimant first knew, or reasonably could have known, of his injury or damage and the cause thereof, but in no event more than twenty years after the date of the nuclear incident. The waiver of any such issue or defense shall be effective regardless of whether such issue or defense may otherwise be deemed jurisdictional or relating to an element in the cause of action. When so incorporated, such waivers shall be judicially enforcible in accordance with their terms by the claimant against the person indemnified. Such waivers shall not preclude a defense based upon a failure to take reasonable steps to mitigate damages, nor shall such waivers apply to injury or damage to a claimant or to a claimant's property which is intentionally sustained by the claimant or which results from a nuclear incident intentionally and wrongfully caused by the claimant. The waivers authorized in this subsection shall, as to indemnitors, be effective only with respect to those obligations set forth in the insurance policies or the contracts furnished as proof of financial protection and in the indemnity agreements. Such waivers shall not apply to, or prejudice the prosecution or defense of, any claim or portion of claim which is not within the protection afforded under (i) the terms of insurance policies or contracts furnished as proof of financial protection, or indemnity agreements, and (ii) the limit of liability provisions of subsection (e) of this section.

(2) With respect to any public liability action arising out of or resulting from an extraordinary nuclear occurrence, the United States district court in the district where the extraordinary nuclear occurrence takes place, or in the case of an extraordinary nuclear occurrence taking place outside the United States, the United States District Court for the District of Columbia, shall have original jurisdiction without regard to the citizenship of any party or the amount in controversy. Upon motion of the defendant or of the Commission, any such action pending in any State court or United States district court shall be removed

or transferred to the United States district court having venue under this subsection. Process of such district court shall be effective throughout the United States.

Percentage limitation; distribution plans; claim disposition and fund distribution plans; allocation for personal injury, property damage, and possible latent injury claims; approval, disapproval, or modification; adoption of other plan; orders for implementation and enforcement of provisions; area orders effective; report to Joint Committee by Commission; contents

(o) Whenever the United States district court in the district where a nuclear incident occurs, or the United States District Court for the District of Columbia in case of a nuclear incident occurring outside the United States, determines upon the petition of any indemnitor or other interested person that public liability from a single nuclear incident may exceed the limit of liability under subsection (e) of this section:

(1) Total payments made by or for all indemnitors as a result of such nuclear incident shall not exceed 15 per centum of such limit of liability without the prior approval of such court;

(2) The court shall not authorize payments in excess of 15 per centum of such limit of liability unless the court determines that such payments are or will be in accordance with a plan of distribution which has been approved by the court or such payments are not likely to prejudice the subsequent adoption and implementation by the court of a plan of distribution pursuant to subparagraph (3) of this subsection (o); and

(3) The Commission shall, and any other indemnitor or other interested person may, submit to such district court a plan for the disposition of pending claims and for the distribution of remaining funds available. Such a plan shall include an allocation of appropriate amounts for personal injury claims, property damage claims, and possible latent injury claims which may not be discovered until a

later time and shall include establishment of priorities between claimants and classes of claims, as necessary to insure the most equitable allocation of available funds. Such court shall have all power necessary to approve, disapprove, or modify plans proposed, or to adopt another plan; and to determine the proportionate share of funds available for each claimant. The Commission, any other indemnitor, and any person indemnified shall be entitled to such orders as may be appropriate to implement and enforce the provisions of this section, including orders limiting the liability of the persons indemnified, orders approving or modifying the plan, orders staying the payment of claims and the execution of court judgments, orders apportioning the payments to be made to claimants, and orders permitting partial payments to be made before final determination of the total claims. The orders of such court shall be effective throughout the United States.

(4) The Commission shall, within ninety days after a court shall have made such determination, deliver to the Joint Committee a supplement to the report prepared in accordance with subsection (i) of this section setting forth the estimated requirements for full compensation and relief of all claimants, and recommendations as to the relief to be provided.

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23 O.S. § 9. *Jury may give exemplary damages, when*

In any action for the breach of an obligation not arising from contract, where the defendant has been guilty of oppression, fraud or malice, actual or presumed, the jury, in addition to the actual damages, may give damages for the sake of example, and by way of punishing the defendant.